











# INDIAN NOTES

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PUBLISHED QUARTERLY BY THE  
MUSEUM OF THE AMERICAN INDIAN,  
HEYE FOUNDATION

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# INDIAN NOTES

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1927



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VOL. IV

JANUARY, 1927

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## HURON HUNTING TERRITORIES IN QUEBEC

HURON ethnology has long been something of a puzzle to investigators of the eastern Indians. While the entire backbone of the social and economic structure of the tribe has been typical of the Iroquoian culture from which it sprang, there have stood forth certain peculiarities in the recorded ethnology of the tribe which raise the question of contact with the Algonkians both in early and in later times.

The following observations on the hunting practices of those of the nation who migrated from Ontario eastward into the neighborhood of Quebec prior to 1667 are offered for consideration. The eastern Huron, subsequently acquiring the designation "Hurons of Lorette," placed themselves in close contact with the Algonkian Montagnais and Wabanaki, who practised the well-known

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hunting methods of the northeastern forest tribes. The Hurons of Lorette have consequently been subjected to strong northeastern Algonkian and French influences, to which by now they have almost entirely succumbed. Until several generations ago, since which time French intermixture has greatly transformed them, they were living the dual type of social and economic life that is so interesting as a specimen case in the history of primitive society. For with the original maternal sib-organization of the Iroquoian peoples, and its supposedly communal property system in full force, as one interprets the testimony of Sagard (*circa* 1632),<sup>1</sup> they were nevertheless operating their hunting activity on the principles of the Algonkians, having the paternally inherited family hunting territories with which we have now become familiar.

The information to be offered is unfortunately brief at this late day, for now only one of the family heads attempts to carry on the industry of the "bush." He is of the GrosLouis family and one of the grandsons of a hunting sire whose descendants have become snowshoe, basket, and souvenir-

<sup>1</sup>J. N. B. Hewitt (*American Anthropologist*, n.s. vol. 19, 1917, pp. 435-36) authenticates the allusion to the community of Iroquois hunting grounds in the traditional history of this people.

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goods makers. Harry GrosLouis still hunts upon his grandfather's grounds between the Lake St. John and the St. Lawrence watershed, although constantly harassed by the perplexities created by the new order of things, namely, the encroachment, from the Indian point of view, of settlers into the game regions, and, equally bad as the Indians see it, the leasing of fishing and hunting rights by the Government to sportmen's clubs which regard the native hunters as poachers and deal with them as such. The second and last great debacle in the history of this ill-fated nation!

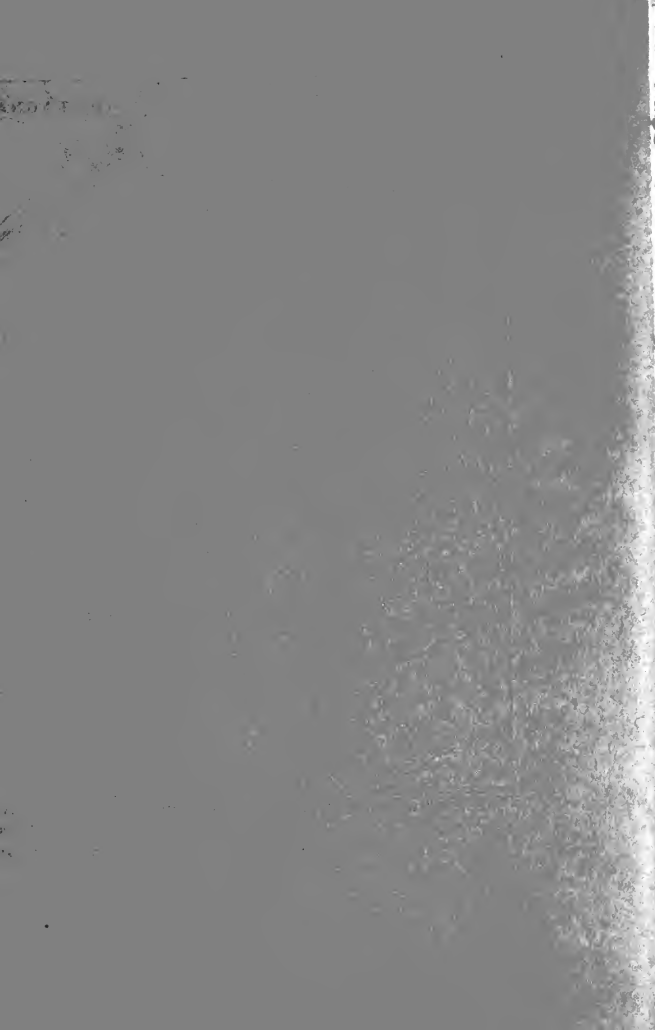
In 1920, while stopping at Lorette for the purpose of recording information on the subject, I began the collection of notes offered here; and again in 1923, with more time and more experience at my command, an opportunity arose to verify and extend it. It was possible to gain information concerning four family hunting groups whose districts were remembered. The investigation was much aided by Prudent Sioui, who, I may add, is now considered to be one of the best living informants on matters of history and ethnology of the tribe.

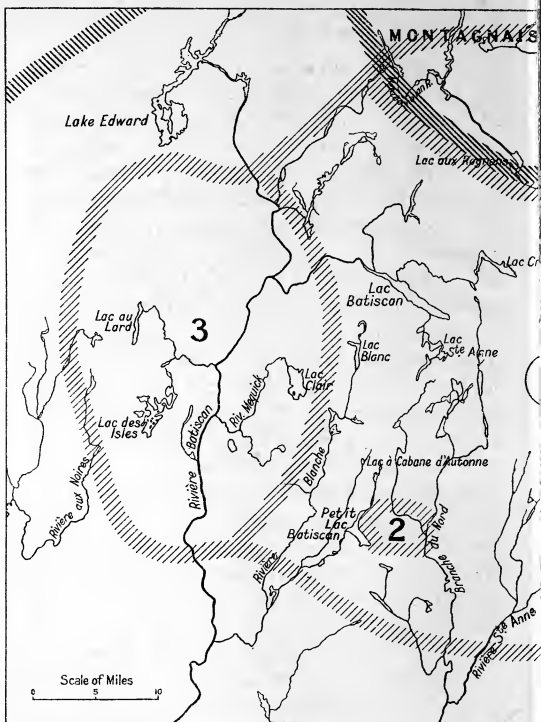
The general region extending northward from the edge of the settled and intensely farmed lands of the French along the St. Lawrence basin nearly to the headwaters of the St. Anne, the Jacques

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Cartier, the Batiscan, and the Montmorency rivers, comprised the zone of operation of the Huron hunters from Lorette. They touched the territories of the southernmost Montagnais as they neared Lake Edward, the Metabetchouan river, Rivière aux Écorces, and Malbaie river. This range, at least, was considered property, in the sense of the term understood by hunting peoples, of the tribe. On the watershed of the Trenche river the Huron may have occasionally encountered stray hunters of the Têtes de Boule. It should be noted that there was some overlapping between the districts of the Huron and the Montagnais of Lake St. John, because some of the hunters of the latter band extend southward a little below the divide separating the waters of the Opikobau and Metabechouan rivers from those flowing into the St. Anne and Jacques Cartier drainage area. This, however, is to be expected, for the Indians of Lorette never made any endeavor to adjust claims with the Montagnais, nor did they incur any disputes with them when occasionally they encountered each other during their winter sojourns in the bush. The Montagnais were never inclined to push their hunting grounds southward on account of the despoliating effect of the presence of settlers upon the game. In fact they regarded, and still regard, the Huron

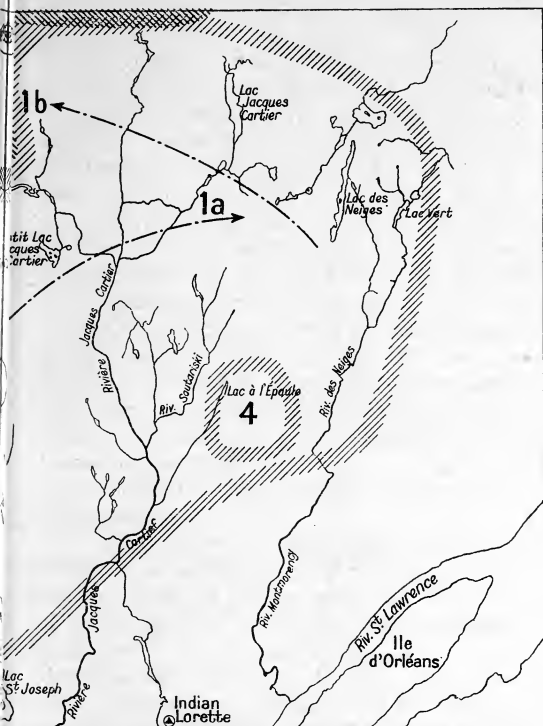






REGIONAL CHARTS OF PARTS OF QUEBEC, PORTNEUF, AND MONTMORENCY  
HURONS

1, FRANCIS GROSLouis (1A AND 1B MOVEMENTS OF LATER GENERATIONS). 2



COUNTIES, PROVINCE OF QUEBEC, SHOWING HUNTING DISTRICTS OF THE LORETTE

1, SÉBASTIEN SILOU. 2, MAGLOIRE ROMAIN, ALEX. PICARD. 3, FRANÇOIS GROSLUUIS





1, FRANCIS GROSLOUIS (1A AND 1B MOVEMENTS OF LATER GENERATIONS). 2, PRUDENT SIOUI. 3, MAGLOIRE ROMAIN, ALEX. PICARD. 4, FRANCOIS GROSLOUIS



PROVINCE OF ONTARIO, SHOWING BOUNDING DISTRICTS OF THE

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as belonging to this fraternity of industry. And the Lorette hunters were too few to overflow their customary locations on the southern and more accessible waters along the lower Batiscan lakes and streams. For their part the men of Lorette were kept busy making short excursions into the hunting regions and were more likely to spread east and west than northward in trying out new trapping zones. I also found that there existed some admiration for the Montagnais, who were living the independent life of an earlier culture period, tempered with some sympathy for their hardships. It may be, however, that this sentiment was tempered by the knowledge of the superior numbers and greater fortitude of the Montagnais of the interior.

Our information groups itself about the following hunters:

1. Francis GrosLouis, who died about 1870 at the age of eighty-eight years, maintained the hunting rights over territory embracing the waters of Rivière Blanche, St. Anne and Jacques Cartier rivers nearly to their sources. It also ascended almost to the head of the Batiscan. His winter camps, however, were situated near the center of the area, one especially mentioned being at Lac Cabane d'Autonne. This territory is considered to have been the most extensive Huron holding,

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for the family of Francis was a large and important one in the tribe then as it is today. It is recalled that Gros-louis often met the Montagnais hunters who, the Huron say, frequently came south as far as Opikobau, to which they claimed the right. It is interesting to observe how the inheritance of this wide area was portioned among the three sons of Francis. These, Francis, Felix, and Daniel, by names, survived him. C. M. Barbeau, who made an intensive study of the Huron,<sup>2</sup> mentions a Francis Gros-louis, ex-head chief, who died in 1912 at seventy-six years of age, as a member of the "Turtle clan." The three moved a little northeast to the grounds centering around Lac Vert and Lac des Neiges. This I assume was due to a retreat of the Montagnais hunters of the Tadousac band who migrated on their part eastward and northward across the Saguenay about that time, as we know from their own testimony. The hunting and trapping line was continued in the next generation by the sons of Daniel Gros-louis. They again pressed a little northward on the drainage of Jacques Cartier river and invaded the heads of the Metabechouan river and Rivière aux Écorces, establishing themselves principally at Lac au Rognons, Lac Croche, and Lac

<sup>2</sup> Huron and Wyandot Mythology, *Memoir 80, Geol. Survey of Canada*, 1915, p. xii.



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au Mort. It will be seen that they were pioneering, from the Huron point of view, into the horizon of the Lake St. John Montagnais,<sup>3</sup> who, I have heard from their own lips, had little liking for the presence of their more sophisticated mixed Huron neighbors whose methods were those of the Canadians. The above concludes what was offered by informants in respect to the family of old Francis. The last words to it I add myself. Harry GrosLouis still engages for his living in hunting and trapping over the old paternal domain, but "only where he can," which means that he is prohibited by modern circumstances, both legal and geographical. His brother Théophile does the same, as I had occasion to learn when, in the winter of 1925-26, he accompanied F. Johnson and myself northward into the Batiscan endroits with his snowshoes and bush equipment—for purposes undeclared!

2. Thomas Sioui, the progenitor of a large family at Lorette, of a generation ago, might be included as one of the hunting proprietors of the Huron. He was induced and permitted to join the company of Francis GrosLouis and established his camp headquarters at Lac des Neiges,

<sup>3</sup> It may be noted that, of the Lake St. John Montagnais, Matsinabec occupies the basin of the Opikobau, Basil that of Rivière aux Écorces, and Jourdain claimed rights still farther south.

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where a tract of country five miles or so in each direction was consigned to his charge. It was understood that his sons could continue to hunt here, but none of them took to this form of livelihood.

3. Magloire Romain and Alexandre Picard, also prominent family ancestors at Lorette, were located westward of the preceding hunters, on the immediate waters of the Batiscan, Lac des Isles, Lac Bellevue, Lac Clair, out to the Miguick river and generally northward to the vicinity of Lake Edward. Their permanent winter camp was at Lac des Isles. Their location may have brought them into proximity with the more southerly families of the Têtes de Boule, a matter to be cleared up when the information obtained from this tribe by Mr. D. S. Davidson is made available. There is also a possible conflict with the claims of the St. Francis Abenaki who had preëmpted hunting privileges in this general region, according to the evidence obtained by Dr. A. Irving Hallowell.

4. François GrosLouis is given as another hunter who had rights in the region at the head of Jacques Cartier river, at a stream called Rivière l'Épaule. This was a small holding, said to be but seven miles in extent, and is evidently to be regarded as a partition of the larger GrosLouis territory in some way that was not well under-

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stood by those who were furnishing the information.

The question of the matrilineal sibs is involved in a study of the social organization of this people. The Huron were divided into exogamic maternal sibs, as follows: Great Turtle, Little Water Turtle, Mud Turtle, Wolf, Bear, Beaver, Deer, Porcupine, Striped Turtle, Highland Turtle, Snake, and Hawk.<sup>4</sup> If the cultivated lands of the early Huron were held and worked in community, as we are in several cases directly informed, the same sib-community interests could not have united the family hunting groups and their hunting territories, for the latter were paternally inherited. For those to whom a concrete case is a requirement, we may take the case of old François Gros-louis. Under the maternal sib-organization of the Huron his children would have belonged to the sib of his wife and therefore Francis junior, Felix, and Daniel would not have been of his social classification. So also in the next generation the sons of Daniel, who inherited their father's and grandfather's hunting locations, would in their turn be of another sib (clan) identity derived through their mother. Thus in three generations the same hunting territory would have been in the hands of members of three different sibs in succession—a

<sup>4</sup>Compiled from Morgan, Powell, and Connelley.

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clear case in point. This could be argued further. For instance, if any hunter should have married twice, both times taking women of different sibs and had sons by them, then his sons, of different sib membership through their mothers, would have been partners in the patrilocal company—a clear case of industry segregated to the sexes: hunting to the men, farming to the women. In illustration of the matter, so far as we can go now with only traditional information on the sib identity of the hunters listed, their affiliations are shown as follows:

<i>Paternal Family Group</i>	<i>Sib</i>
(A) Old Francis GrosLouis (died about 1870).....	Wolf
(B) Francis GrosLouis (died 1912), (son of A) ...	Wolf
(C) Daniel GrosLouis } (sons of B).....	Wolf
Felix GrosLouis }	
(D) Harry GrosLouis } (sons of C).....	Wolf
Théophile GrosLouis }	
Thomas Sioui.....	Bear
Magloire Romain.....	Tortoise
Alexandre Picard.....	Deer

The above sib identities were furnished by ex-chief Maurice Bastien of Indian Lorette and placed in my hands by Dr. C. Marius Barbeau (correspondence, Sept. 23, 1926). It shows the complete transfer from maternal and paternal descent in the sib among the Huron of the last four generations—a phenomenon to be noted and accounted for in eastern Indian ethnology: one due either to French-Canadian mixture or to a combination of the economic factor of the chase and Algonkian adjacency.

The frequency of marriage with French-Canadian

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women in later times has completely broken up the validity of sib descent among the Huron. For maternal sib descent could not be maintained where the mother is white and hence not assimilated with the social pattern. While we lack specific knowledge of the racial classification of the mothers of the men noted, the fact remains that the sib names descend now from father to *son*. Prudent Sioui estimated that more than twenty of the men in the village in 1923 were married to French-Canadian women. It is rather curious that this social change brought about by the adoption of modern European practice should have resulted in the Huron acquiring the social pattern of the Algonkians, representing an epoch of social history belonging back in the hunting stage. If it were not for the likelihood that their social devolution was caused by French intermarriage, one might be led positively to attribute it to Algonkian influence.

In conclusion, it seems appropriate to remark that from a survey of eastern Huron ethnological material in museums and in the hands of the people themselves, there is considerable to indicate the absorption of Algonkian ideas and devices. It would be of service in the working out of problems in the northeast if the topic were made one of detailed attention. The features

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that appear in Huron culture to suggest Algonkian origin or derivation are to be found in matters concerned with the hunting complex: methods of hunting and transportation, the use of birch-bark, the architecture of hunting camps, and articles of garb and protection required in the winter bush-life of the Quebec forests. And, finally, the matter of Huron decorative motives in moose-hair embroidery and bead-work awaken a realization that this fugitive Iroquoian tribe in its flight eastward penetrated an Algonkian territory and came directly into contact with two important northeastern Algonkian culture groups: the Montagnais on the north, and the westernmost of the Wabanaki in the region south of the St. Lawrence.

FRANK G. SPECK

### THE MUSEUM CENTRAL AMERICAN EXPEDITION, 1925-1926

DURING the field season of 1925-1926 the Museum Central American expedition continued in the Republics of Guatemala and El Salvador the ethnological and archeological studies commenced two years previously.<sup>1</sup> The general purpose of

<sup>1</sup> See *Indian Notes*, vol. II, no. 1. The writer wishes to thank many friends who have been helpful, especially Messrs. Fernando

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the work has been to examine the types, distribution, and sequence of ancient remains, and at the same time to pick up any ethnological material which could be procured en route. The results may be summarized as a series of collections from Guatemala and Salvador representing the living Indian tribes, and a fairly large and representative archeological collection from the latter country. Stratigraphical studies in central Salvador have thrown new light on culture sequence, and have, it is hoped, given a firmer basis and a new orientation to archeological research in northern Central America.

GUATEMALA.—*Ethnology*. The "Altos," the southwestern highland region of Guatemala, is inhabited chiefly by tribes of Maya stock who have been little influenced by European contact. With the possible exception of the Pueblo region in the United States, probably nowhere in the New World is so much and such varied ethnological material available to students within such a small and easily accessible territory. However, as yet the Guatemalan highlands remain practically a virgin field, for scarcely a beginning has been made in the systematic study of native culture.

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Cruz, Carlos Luna, Adrian Recinos, and Virgilio Rodríguez Beteta in Guatemala, and Juan Balette, Jesus M. Bran, Jorge Lardé, Marcos Letona, and Hector Varquero in Salvador.

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Brilliantly colored costumes are a picturesque and beautiful feature of the highlands. Each village usually has its distinctive type of dress both for men and for women. In some towns, in addition to the everyday wear, there are special ceremonial costumes used by the members of the *cofradías* (religious societies) and by the civil officials. These are not only more elaborate, but in many instances reflect the garments worn at the time of the Conquest. As an example of such survivals, in fig. 1 is shown a Quiche blouse embroidered with *Purpura patula* dyed thread. The use of this shellfish to dye cotton is discussed by Mrs. Nuttall in the *Putnam Anniversary Volume*. In Guatemala it is today found only on ceremonial vestments, and there but rarely.

The ordinary hand weaving of the highlands is done on looms such as we illustrate in fig. 2. The upper end is attached to a post or rafter about six feet above the ground. The warp threads slope diagonally down to the lap of the operator and are kept taut by a strap passed around the buttocks. Similar looms are shown in Mexican codices. Today, however, hand weaving is giving way to primitive foot-power looms, operated by men rather than by women, and to cheap imported textiles. It therefore is incumbent on institutions interested in this area to secure ade-



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quate collections before the textiles become rarities and purchasable only at high prices. Of such a collection the Museum now has a fair beginning from the Quiche, Pokoman, and Cakchiquel Indians.



FIG. 1.—Quiche huipil from Quezaltenango, Guatemala.  
(14/5519)

GUATEMALA.—*Archeology*. A visit to the Finca Arevalo ruins on the outskirts of Guatemala City as usual led to the discovery of stone sculptures. These, together with previous finds, are published in *Indian Notes*, vol. III, no. 3.

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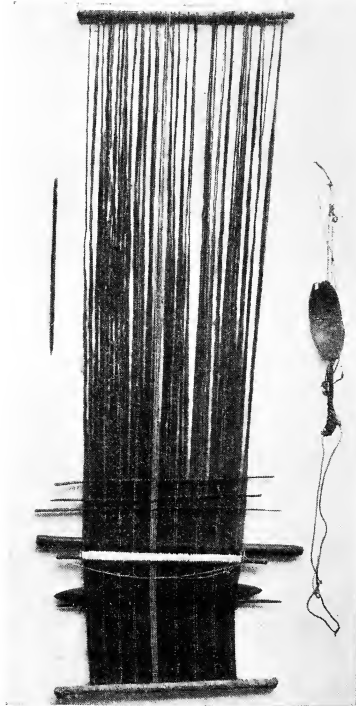


FIG.2.—Quiche loom, Santo Tomás Chichicastenango,  
Guatemala. (14/5570)

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At Tecpan a crude and much-battered statue was found and photographed.

An inspection was also made of ruins at Asunción Mita near the border of El Salvador. An ancient plaza approximately a hundred yards square, surrounded by stone foundation mounds, may be seen a short distance from the modern town on the left side of the road to Santa Ana. The mounds are constructed of extremely thin slabs of stone, and recall the masonry seen at the ruins near Rabinal in the highlands of Guatemala. The largest mound at Asunción Mita is a little more than twenty feet high. No traces of building remain on the summit, but recently a vaulted room has been discovered in the interior of the mound. In places the masonry has fallen and has sagged elsewhere almost to the point of complete collapse. The room is about twenty feet long and six feet wide, but its height could not be determined owing to the débris covering the floor. In each of the long walls were a series of niches two feet wide and nine inches deep. In the surrounding country smaller mounds may be seen in great numbers and over a wide area.

The general type of this ruin recalled to the writer the remains at Ipaltepeque (Lake Guija), Tacuzcalco, and Cihuatan, in Salvador. All four sites may be assigned to the Pipil on historical evidence.

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The oidor Diego García de Palacio passed through Asunción Mita in the year 1576. He states that it was a center of pilgrimage, especially frequented by Pipil and Chontal (Lenca) Indians. Of the rites practised there he has left a detailed description.

SALVADOR.—*Ethnology*. Ethnological studies in Salvador still may be pursued in many places where the Indian population is unadulterated. However, in villages where racial intermixture has occurred and an ostensibly European form of life has been adopted, many pagan survivals are still to be found. We cite a few instances gleaned in the formerly Pipil region near Suchitoto.

Marriage is proposed when the prospective groom presents a load of wood to the girl's father. If the wood is accepted, so also his suit. A friend and the father of the groom then seek the father of the bride and entertain him lavishly until he consents to set a date for the wedding. For the ceremony a semicircular arbor of boughs is erected, within which are placed the family saints. Here the bride and groom seat themselves on stools, and around them dance the guests, who pour money into the bride's blouse. (Old people still remember the days when cacao-beans served as money. Ten beans were worth two candles or half a real.) The dance finished, the bride is

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sometimes placed on a frame and carried into the bush, or else the bride and groom enter the house. The guests all wait for proofs of virginity to be produced, lacking which the bride might be rejected. Wife-lending is said to have been practised by the Lenca, but not by the Pipil.

Internal pains are generally thought to be due to some substance introduced by witchcraft; hence such expressions as "they've put a toad in me" (*me ha metido un sapo*).

The moribund are thought to be suffering intense pain and sometimes are strangled to relieve their sufferings. First, however, the vitality of the patient is tested by placing him in some awkward position, and then, if he remains motionless, he is choked. In purely indigenous villages it is both said and indignantly denied that certain men are appointed for this office. At the moment of death candles are lit and passed around the head of the dying that demons may not seize the unfledged soul. Burials are usually accompanied by music, although many towns impose a tax in order to discourage the custom. If a child dies a feast is held at once, but when an adult dies the feast is held nine days later and a portion is set aside for the use of the dead man. On these occasions there is much drinking and dancing.

We cite these few examples of pagan survivals

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because they indicate a condition generally prevalent in Central America, where aboriginal beliefs and customs can be found in all classes of society. The advent of rapid transportation, especially the coming of the automobile, is breaking down barriers of isolation and extinguishing provincialism. Hence, half-breed populations descended



FIG. 3.—Huipil from Nahuizalco, Salvador. (14/7073)

in part from extinct Indian groups call more immediately for study than the purely Indian tribes, which are less affected by white civilization.

Comparatively little ethnological material was obtained in Salvador in 1926, but the writer was fortunate enough to procure four embroidered huipiles from Nahuizalco, a town where the art of

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weaving died out many years ago. One of these we illustrate in fig. 3. The patterns, it will be noted, are not unlike those seen on Izalcos belts, but they are applied by true embroidery in place of the double shed woven technique used at Izalcos. Other examples of indigenous handiwork are shown in fig. 4, *a*, *c*.

**SALVADOR.**—*Archeology*. Archeological investigations in El Salvador were confined to stratigraphical studies in the vicinity of San Salvador, a thorough inspection of Pipil ruins near Suchitoto, and brief visits to the ruins of Quelepa and Chalchuapa. The results of stratigraphical studies, the most important contribution of the season's work, are too complex to be dealt with in the compass of this paper and will be published separately.

Near Suchitoto visits were made to the following ruins: Hacienda Los Almendros, Hacienda Asunción, Hacienda Milingo, Los Amatillos, Hacienda Consolación, Ciudad Vieja (La Bermuda), Pueblo Viejo, Tazagero-Chaguitan, Valle Palacios, Hacienda El Ceretal, Hacienda Trapichito (two sites), Colima, Chacalingo, Hacienda Ichanqueso, Hacienda Tacanagua, and Cihuatán. Specimens from most of these sites, now in the Museum collection, afford much information on the distribution of archeological types. Test

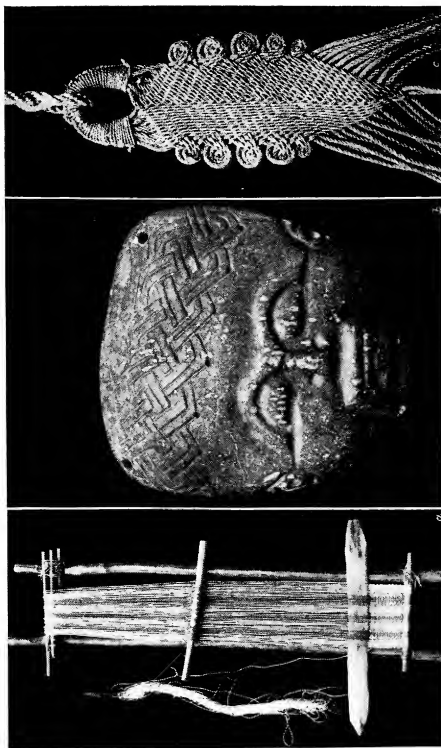
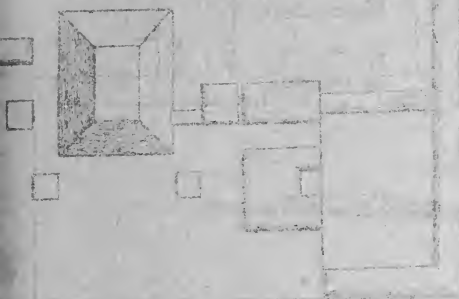


FIG. 4.—*a*, Loom, Quezaltepeque; height, 3.5 feet (13/1034). *b*, Marble gorget, Chilanga; height, 7 in. (13/601). *c*, Hammock knot, Cacaopera; height, 10 in. (13/1004)

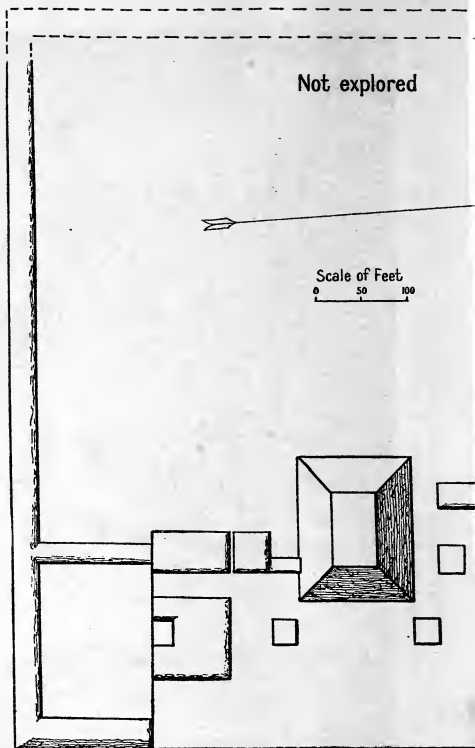


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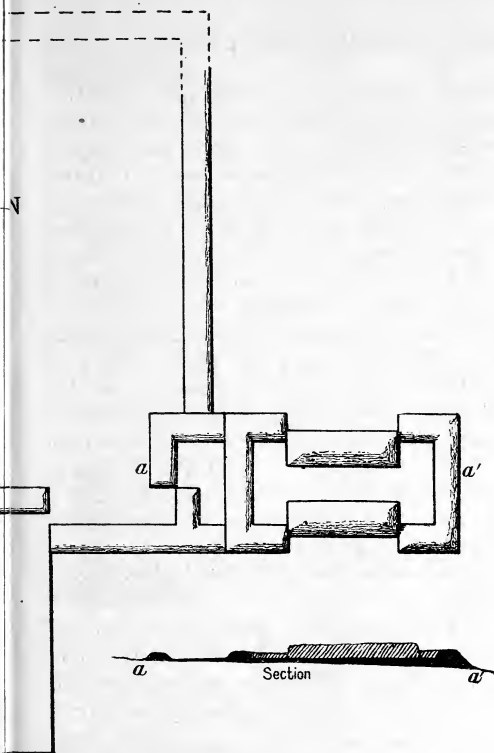
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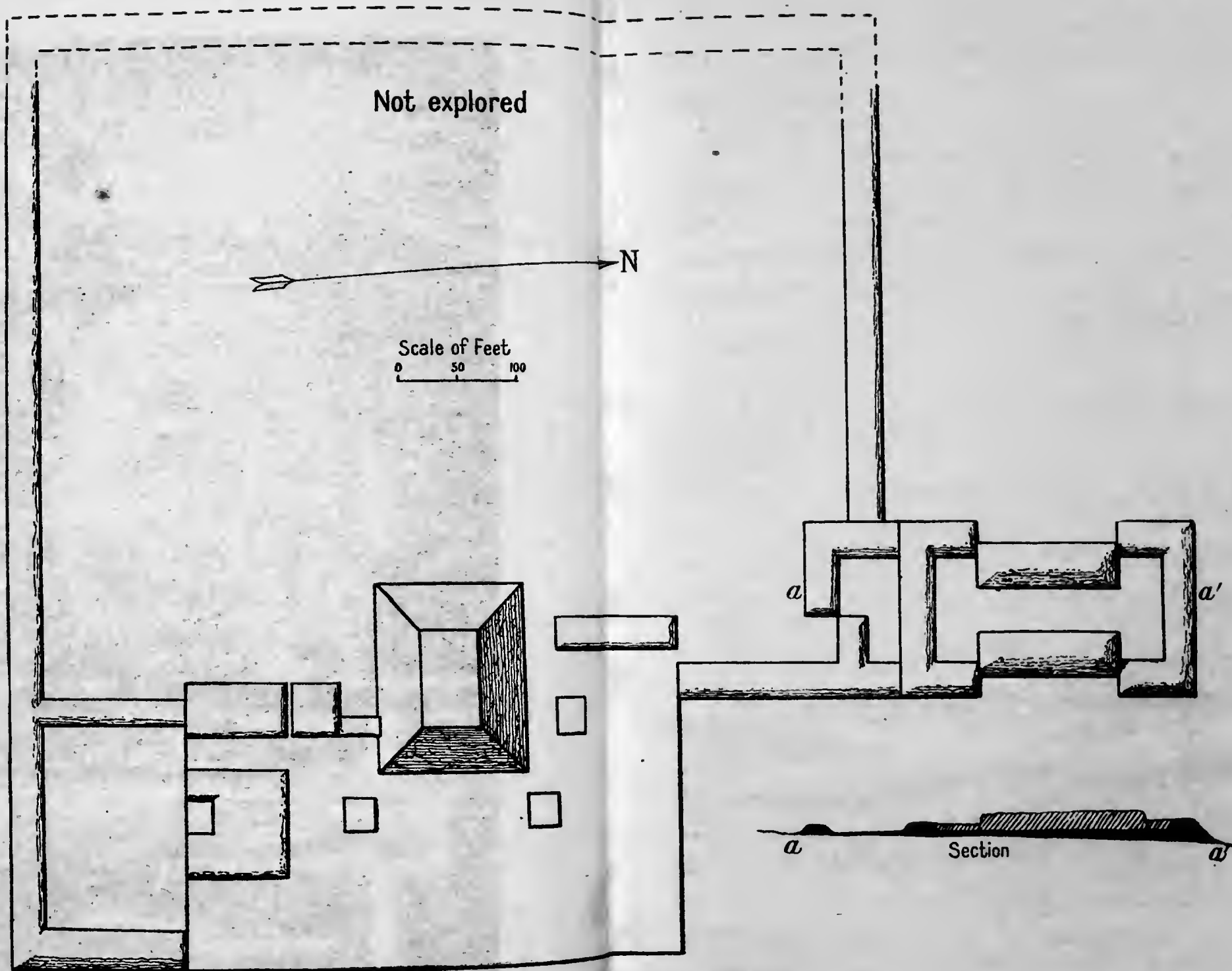


SKETCH MAP OF



WATAN, SALVADOR





SKETCH MAP OF CHUATAN, SALVADOR



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pits were dug at Hacienda Milingo and Hacienda Los Almendros.

The most important ruin visited was Cihuatan. It covers a vast extent, impossible to estimate owing to the forest, and consists for the greater part of low house foundations of stone. The central portion (pl. 11), which stands on a hill overlooking the Acelhuate river, contains several plazas, mounds, and a ball (*tlaxtli*) court, all constructed of stone. The largest mound measures at the base approximately forty by fifty paces, and rises in six terraces to a height of about forty feet. Years ago someone had dug a deep hole in the center of the summit. Within was found a sherd from a big burial urn, a large fragment from which is now in the Salvador National Museum (fig. 5, *b*).

The ball court (locally known as the cuartel) has crumbled badly. The main walls still stand nearly ten feet high, however, and may have been fifteen feet thick and one hundred and forty feet long. At each end are small courts set at right angles to the main court. Their walls are about five feet high. These figures refer to the inner height of the walls; on the outside the height is a little greater, as the land slopes away except on the south side.

The ball courts nearest to Cihuatan now known



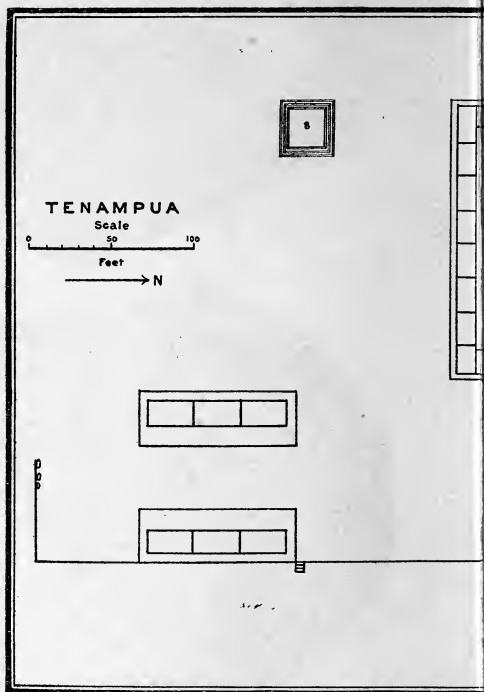
FIG. 5.—Burial jars, Salvador. *a*, Valle Palacios; height, 26.5 in. (15/551). *b*, Cihuatlan; height, 18 in. (in the National Museum of Salvador)





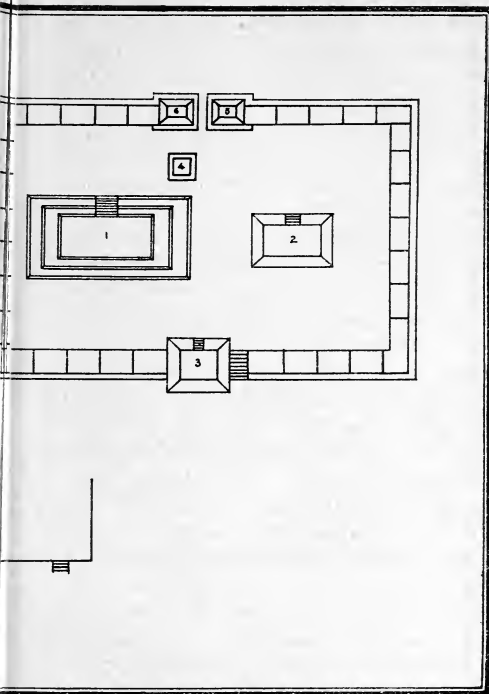
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BALL COURT AND TEMPLE

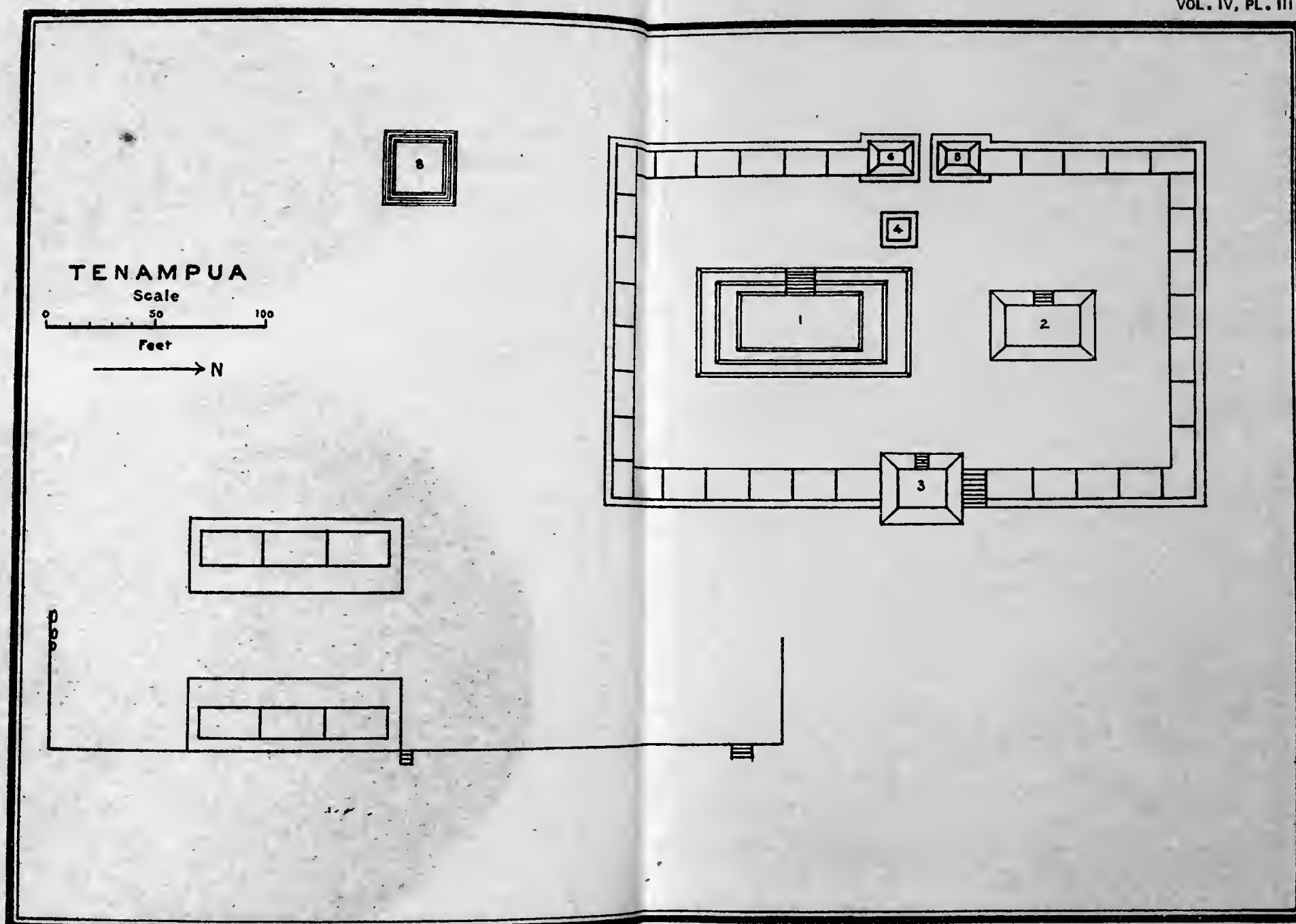
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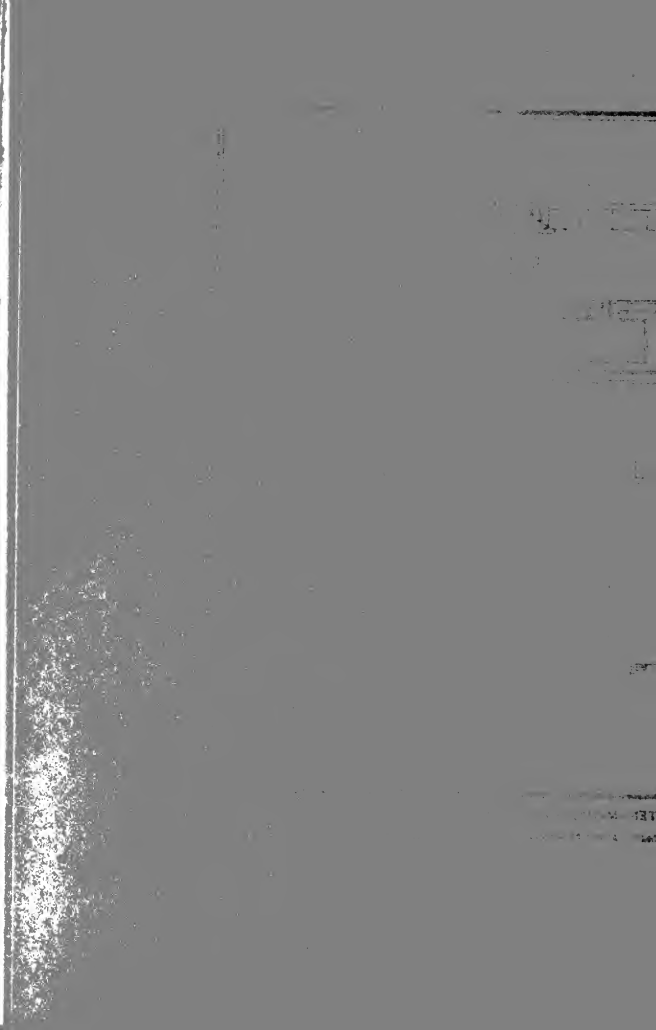
UP, TENAMPUA, HONDURAS

CHAEOLGY AND ETHNOLOGY, HARVARD UNIVERSITY





BALL COURT AND TEMPLE GROUP, TENAMPUA, HONDURAS  
COURTESY OF THE PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY, HARVARD UNIVERSITY



## INDIAN NOTES

are at Tehuacan in Salvador, Tenampua in Honduras, and at Utatlan, Rabinal, Kalamté, and Sajacabaja in Guatemala. As others are known in southern Mexico, a continuous if sparse distribution of the game over a wide area is indicated.

In outline the court at Cihuatlan recalls the well-known example at Chichen Itza in Yucatan, like which it may have had small temples on the north and south walls, as indicated by slightly greater débris than elsewhere. It also resembles the ball courts portrayed in ancient native manuscripts, which always have secondary courts enclosing the ends. The writer suspects that in many cases the secondary courts were omitted (apparently the case at Uxmal) or else were built of more perishable materials than the main walls. In some instances houses erected parallel to each other served as ball courts. Thus the courts at Tenampua (Honduras), Utatlan (Guatemala), and El Rosarito (Chiapas) all consist of two buildings, parallel and facing, on low vertical-walled platforms extending toward each other. The example at Tenampua we show in pl. III; the Utatlan and El Rosarito courts have been published by Sapper.<sup>2</sup> The platforms on the examples cited all are so low that the game must have been played not only against them but also against the walls of the

<sup>2</sup> *Annual Report of the Smithsonian Institution for 1895.*

buildings which they supported. The ball games described in the *Popol Vuh*, in which the kings of Xibalba opposed Xbalanque and Hunahpu, evidently were played on a court edged by houses, for one incident hinges on the ball being lodged on a molding. Many instances of parallel mounds can be adduced—for instance, at El Ceretal in Salvador, or structures 13 and 14 at Yaxchilan, or structures XXXVII and XXXVIII at Piedras Negras,<sup>3</sup>—which strongly suggest ball courts, although we cannot actually demonstrate their use for that purpose. The great antiquity of the game in Middle America is indicated by passages in the *Popol Vuh* which allude to it in the far mythological past, long before any events which can be considered even symbolically historical.

In the vicinity of Suchitoto, where plumbate or glazed ware is found in some quantity, an effort was made to determine the source of the clay from which it was manufactured. Information was obtained which indicates that this ware did come from the Suchitoto region and not from Guatemala as has been supposed by some. In Suchitoto today there are many potters. The men have adopted the Spanish technique, work

<sup>3</sup> These mounds are not shown on Maler's map, but are given on a much more accurate survey made some years ago by the Carnegie Institution of Washington. For a copy of this I am indebted to Mr. O. G. Ricketson.



## INDIAN NOTES

on a wheel, stain their ware with copper, and glaze it with lead; the women work entirely by hand, though in a different manner from that employed in eastern Salvador. Inquiry among these potters as to the existence of "a clay which assumed a natural glaze when fired" brought forth the answer that such a clay had been used long ago but that none knew whence it came. More specifically, an old woman said that her grandmother had used such a clay and had obtained it near the Valle Juancora. Then she added without prompting that this clay was peculiar, for it assumed either a gray-green or orange color according to the temperature at which it was fired. This, of course, is a faithful description of plumbate ware, and shows the general region from which the clay came, even though the exact spot remains to be determined.

Of new archeological types discovered as a result of the season's work, large burial or storage jars from central Salvador deserve mention. From the associated objects it seems that they are of Pipil workmanship. These jars are globular or ovoid; they have thick lips, evidently strengthened by a cord layed in an encircling groove; the large loop handles are usually set horizontally. Within the example in fig. 5, *a*, a portrait effigy bowl containing the ashes apparently of a cremation was

found. Another example uncovered by the writer on the Hacienda Milingo had fully a thousand pounds of rock piled above it. This method of interment explains why so few of the vessels have emerged intact.

Urn burial of cremated ashes is well known in Middle America. It was practised by the Aztec and the Maya of Yucatan; it was very commonly

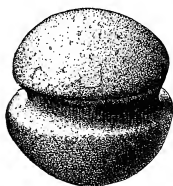


FIG. 6.—Pottery boleadora, Suchitoto, Salvador. One-third size. (14/9840)

employed in the Zapotec region, as testified by the many elaborate burial urns which have been exhumed. In Guatemala burial urns stylistically affiliated with the north occur in the Costa Cuca and Quiche districts. In Nicaragua cremated burials in urns are found in the region of the big lakes, but here we begin to encounter complete bodies buried in jars, a practice most highly developed in eastern South America and extending as far south as the delta of the Paraná river in Argentina.

A rather surprising find in central Salvador was a number of pottery *boleadoras* like fig. 6. The bola of course was extensively used by the Patagonian and Araucanian tribes in South America. It is found archeologically in eastern Tierra del Fuego.

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Also it was employed by the western Eskimo. In Central America it has not been reported, but in addition to the pottery examples from Salvador there is a jade boleadora from Guerrero in the American Museum of Natural History. Several stone objects from the Antilles also suggest boleadoras. The writer has also seen a large stone specimen reminiscent of Patagonia which was found on the Finca Miraflores in Guatemala and is now in the Batres Jáuregui collection. In the presence of the bola in Middle America we may see perhaps cultural interlocking in very remote times with South America. It is also suggested by that typically South American weapon, the blowgun, which was a mythological weapon and a toy in Middle America.

In order to obtain more specimens of pottery from eastern Salvador a brief visit was made to the vast ruins of Quelepa near San Miguel. The types encountered we shall discuss elsewhere. They pertain principally to either the Matagalpan or Lenca Indians, but strong Mayan, Chorotegan, and "Archaic" influence is obvious. Of the stone carvings sometimes found in this area we illustrate an outstanding example in fig. 4, *b*. It is a heavy marble gorget carved in a style we believe to be Lenca. A companion piece said to have been found in the same grave is probably

the specimen illustrated by Schuller,<sup>4</sup> now in the collection of Dr. Quiñonez, President of Salvador.

A proposed trip to the Balsam coast was abandoned owing to the advent of the rainy season.

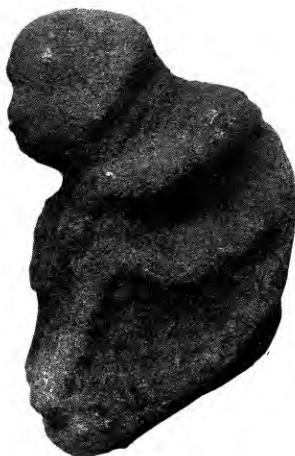


FIG. 7.—Crude stone carving, Balsam Coast, Salvador. (15/553)

However, the purchase of the Justo Armas collection brought to the Museum a representative assortment of stone carvings from that region. Among the commonest of these is a crudely carved human figure such as the one shown in fig. 7. These statues represent a man with bent back and flexed arms and legs. The finish is so rough

that it seems likely they were once coated with plaster. In size they range from a few inches to

<sup>4</sup> In *Revista de Etnología, Arqueología, y Linguística*, San Salvador, 1926, vol. 1, no. 1, pl. 1.

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two feet or more. From the locality in which they are found it appears that they were made by the Pipil, but their stylistic relationship to certain small stone carvings found in western Nicaragua may indicate that they are the product of a pre-Pipil population. In fig. 8 we illustrate a fine metate from the same region, probably of Pipil workmanship. Being carved in effigy form

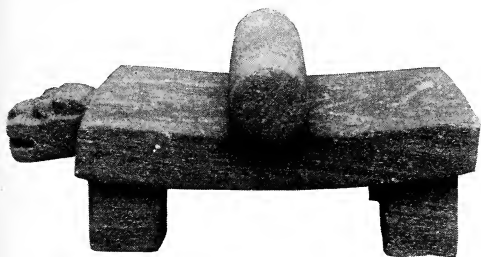


FIG. 8.—Metate, Balsam coast, Salvador. (15/554)

with a projecting animal head, at first glance it resembles a Chorotegan metate. It differs, however, in having a flat grinding plate and four rectangular legs, whereas the Chorotegan metate—in Honduras, Nicaragua, and Costa Rica—always has a curved plate and three triangular legs.

Before closing this description of the season's work we should mention several objects brought

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to Salvador from distant lands, because they illustrate the wide area which must be surveyed to work out the archeological remains of even a small region in Middle America, and because they emphasize the cultural interdependence of its



FIG. 9.—“Paddle stone,” San Salvador. (15/506)

inhabitants. In fig. 9 is a “paddle stone” typical of the Totonac region on the coast of the Gulf of Mexico. Another similar specimen, now in the Soundy collection, was exhumed on the site of the ancient Cuzcatlan. These objects may have

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been brought by the invading Pipil, or they may have come by trade. Together with several finds of stone yokes they indicate cultural connection with the east coast of central Mexico. Another trade object from the northwest is a copper ax of Oaxacan origin found under the streets of San Salvador. Several axes of similar form have been unearthed in Guatemala, but this apparently is the first reported from Salvador. Still another trade piece recently secured is a small jade pendant found inside a jar near Usulután. The jade and workmanship both show that it was manufactured by natives of the Peninsula of Nicoya in Costa Rica. Nicoya jades were clearly much prized of old. They have been found as far south as Panama, and to the north in Nicaragua, the Ulua valley in Honduras, and in El Salvador.

S. K. LOTHROP

### A CHILKAT BLANKET AND A HAIDA "COPPER"

THE decorative art of the Indians of the North Pacific coast, with its characteristic human and animal motives, is well illustrated in two specimens recently acquired by the Museum, representing weaving (fig. 10) and metalwork (fig. 11). This method of treatment of designs by the In-

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dians of the region referred to is not paralleled by the esthetic product of any other aboriginal artists of America.

The Northwest Coast Indians have applied their art to practically all their belongings—clothing, household utensils, hunting and fishing implements, weapons, ceremonial objects, houses, and the well-known totem poles. Tattooing likewise was practised, often the entire body being decorated with totemic emblems. In decorating the objects of their handicraft a wide range of forms and materials is employed, each demanding a style of embellishment in accordance with the shape and a technique to suit the material to which it is applied.

Human and animal forms are realistically represented on the massive carved totem poles and house posts of the Northwest coast. Many of the ceremonial wooden masks are so lifelike that it is evident portraiture was intended in the carvings.

The art of the region mentioned has been expressed largely by carving in wood, but objects of ivory, bone, stone, and metal have also been suitably ornamented by carving, painting, and inlay. Blankets and basketry are made attractive with woven designs, while garments and other objects of leather were either painted or were em-



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broidered with porcupine-quills. Both large and small objects of suitable material and shape were carved to produce as nearly a correct rendition of the human or animal form as possible, yet with a tendency toward the grotesque. In this class realism yielded but little to the usual method of distorting the subject to fit a given space or to meet some other contingency.

Bas-relief was resorted to when the shape of the object to be decorated would not lend itself to any other form of carving.

An entirely different problem was presented when flat surfaces were to receive ornamentation, such as food and storage boxes (although these were sometimes carved in low relief), silverwork, house-fronts, etc., and blankets and basketry. In decorating such surfaces realism was almost abandoned and highly conventionalized designs employed. However, in order that the identity of the animal represented by a pattern should not be lost, one or more characteristic features were given prominence: for instance, if the subject were a beaver, its incisors or the scaly tail were emphasized. The shape of an eagle's beak is portrayed with a hooked tip; a raven's beak, though curved on top, is shown with a sharp point and straight underside; while an owl is indicated with a short hooked beak. A killerwhale is depicted

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by its long upstanding dorsal fin; a shark by a series of curved lines which represent the gills, and occasionally by a row of triangles indicating the sharp-pointed teeth, although these are not accepted as a fixed symbol of the shark. Other animals are emphasized by some well recognized feature, but here realism ends—an elaborate arrangement of fins, paws, ears, eyes, wings, and other components are symmetrically grouped around an accepted emblem.

A good example of this style of ornamentation is shown in the Chilkat blanket (fig. 10), which is of the typical style made for ceremonial use. The grotesque face in the center is surrounded by a black line with white dots. The line is said to represent the tentacle of a squid, the dots the sucking-cups. Other parts of the design seem to have no relation to the squid, but have been used to fill the space. Unfortunately the blanket was not obtained from the original owner, hence it is not possible to present an interpretation of the entire design. The warp strands are composed of a mixture of shredded cedar-bark and mountain-goat wool, while the weft is of goat's wool alone, dyed blue, yellow, and black. The woven surface measures six feet in length by three feet at the widest part.

The "copper" referred to (fig. 11) is more or less

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scutiform. In early days such objects were made of native copper found in Alaska and in parts of British Columbia, but in later times they were made from sheet-copper taken from wreckage or obtained from traders. Fashioning by the original

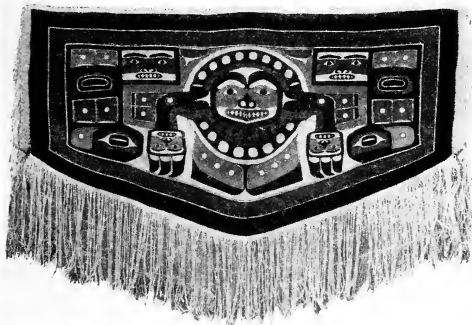


FIG. 10.—Chilkat blanket, Alaska. Size, 6 x 3 ft., exclusive of the fringe. (14/7330)

primitive process entailed a great amount of labor in beating copper nuggets into thin sheets.

Such coppers were used by the coast tribes from Yakutat in the north to Comox in the south and were important items in the potlatch ceremony. Involved in a complex system of exchange, these coppers at times attained great value, which in-



FIG. 11.—Haida "copper" from Yats, north shore of Queen Charlotte islands. Size, 30 x 46 in. (14/9024)

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creased with each change of ownership. In this wise they became symbols of wealth; indeed so highly regarded were they that the valuation given for three coppers at Fort Rupert, Vancouver island, in 1893, was for the first 7500 blankets, the second 6000, and the third 5000 blankets.<sup>1</sup> The unit of value was a single blanket, which represented fifty cents, while a double blanket was valued at three single blankets. These were the accepted media of exchange throughout the coast region, hence all commodities were rated according to their worth in blankets.

The copper shown in the illustrations is 46 inches long and 30 inches across the widest part—several inches larger each way than usual. It is made of commercial sheet-copper about three thirty-seconds of an inch thick.

The engraved design is emphasized by having a pigment painted or rubbed in, and is said to represent a mythical sea-monster. Indeed it requires no elastic imagination to enable one to recognize the mouth of the monster with its large teeth. An eye is shown on each side of the nose, aligned with the nostrils. Over each eye are two small arcs covered by a larger one which represent the ears. The design above the nose is composed of

<sup>1</sup> Boas, *The Social Organization and the Secret Societies of the Kwakiutl Indians*, *Report U. S. National Museum for 1895*.

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two small profiles facing in opposite directions, inserted to fill the space between the ears. Below the mouth, at the right and the left, two flippers or paws are shown. The elliptical figures below the claws or toes of the flippers represent the joints or knuckles, a common way of expressing such features in flat designs of this character, but often they are drawn to resemble eyes. The space between the flippers is filled with a pattern probably intended to denote the tail. Two more profiles are shown here, having more detail than those above the nose, and are represented as facing each other.

This copper was collected from the Haida in the northern part of Queen Charlotte islands by Lieut. G. T. Emmons, U. S. N., retired.

WILLIAM C. ORCHARD

### SOME LAKE-BED CAMP-SITES IN NEVADA

Most maps of Nevada, unless of very recent date, show a good-sized body of water called Humboldt lake, situated twelve or fifteen miles southward from the little town of Lovelock. Fed by Humboldt river, it measured some ten or twelve miles long from north to south, with a width from east to west of approximately five miles at the widest point; and it was kept in its bed by a natural dam blocking the valley to the south.

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About the lake, especially around its northern borders, were beds of green tule rushes and arrow-cane, and there were real trees growing along its banks in some places. A large fresh-water lake is always a great blessing to all living things in a desert land, and Humboldt lake was no exception. It was the haunt of flocks of pelicans and of thousands of wildfowl, especially in the migrating seasons; it was full of fish, big and little; and four-footed creatures from mice to wild horses gathered to drink of its waters.

Of course the lake was a joy to the Indians, who found in the beds of tules and cane an inexhaustible supply of material for mats, baskets, and arrows; they killed such geese and ducks as they needed for food, and they caught fish and dried them to carry their families through the hungry seasons. And it was the presence of the lake that had led the ancient peoples to occupy the Lovelock cave to a remarkable extent, for it lay only two miles away, and the distance of two miles matters little to a desert Indian water-carrier.

But the white man came and took possession of all the land he could use in the valley above: in fact he tried to cultivate some acres that were subject to overflow. And just because the lake had the inconvenient habit of backing up and

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flooding some of the acres, once in a while when it happened to rain, and of drowning out a little alfalfa, the newcomer, with his cocksure superior wisdom, decided, not to make a safety spillway or anything of that kind, but to destroy the lake entirely. So the natural dam was cut through, the lake-bed ditched, and the released waters



FIG. 12.—Bed of Humboldt lake, now dry, showing the only two "wild" trees in the whole region

sent rushing down to lose themselves in the barren wastes of the white alkali flats in Carson sink. And the alfalfa is no longer drowned out, but remains no doubt to nourish a number of hogs and cattle which otherwise might have been compelled to eat something else.

Of course the green tules are now all gone, and the cane is going; the trees are dead or dying; the



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fish have perished to the last "little swimmer;" the pelicans come no more; and the migrating ducks and geese for the greater part steer clear of the valley, while the gaunt desert cattle and the scrubby wild broncos look in vain for their drinking-place.

The old lake-bed is now even drier than the desert lands around it (fig. 12). In fact it has become a favorite dancing ground for "dust devils," the weird little whirlwinds that love to pirouette all day in such places.

In short, the white man has made another "improvement," and he wonders why the Indians look at each other and murmur disgustedly in Paiute whenever the great engineering feat is mentioned.

However, from the archeologist's point of view, the draining of the lake had one good effect, for the receding waters left exposed a number of curious ancient camp-sites on the very bed of the lake itself. And then when the bottom dried, and the desert winds began to blow away the silt and the sand, a number of interesting stone implements and other things were brought to light.

It was on this lake-bed that the writer used to pass occasional Sundays looking for surface specimens during the months our expedition was ex-

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ploring the Lovelock cave, sometimes alone, sometimes in company with other members of the party.

We found the camp-sites scattered over the northern part of the lake-bottom, where the water had been shallowest, and we noticed that the spots selected were usually slight rises in the ground. We puzzled for some time over the problem, trying to work out the reason for the presence of camp-sites in such a place; but when we learned that the lake had sometimes become very low in periods of unusual drought, the answer was simple enough. The Indians had camped on the lake-bed in dry times, when the water was far below its usual level and they could walk dry-shod over many acres ordinarily submerged.

One can locate the camp-sites from quite a distance by the stones lying on the surface of the lake-bed which is otherwise stoneless; and these on close approach prove to be for the greater part broken mortars, broken or unfinished pestles, metates or grinding slabs, and manos or handstones for grinding the seeds and pine-nuts that formed the main support of the Indians in this district. In addition to these are numerous stones cracked to pieces by fire, countless chips and bits of flint and obsidian; many arrowpoints,

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knife blades, and the like, of similar materials and illustrating many forms and sizes; very rude blades of slate, perhaps for cutting fish; occasional flat discs of stone, perforated in the middle like spindle-whorls; a few bowls for straight pipes, made of stone, and some scattered beads made from Pacific Ocean shells. There was no trace of pottery. In some places, newly uncovered by the wind, the crumbling bones of rabbits and other food animals may still be seen, and once in a while a human skeleton, originally buried.

We noticed also occasional artificial collections of stones, either piled up like miniature cairns, or simply circular or oval paved places on the ground, but so far as examined there was nothing buried beneath them. The longest perfect pestle we found had been stuck down vertically in the mud until only the tip projected, and in another place a cache of five perfect pestles lying out on the surface had been arranged, all pointing to a common center, like the petals of a flower (fig. 13). Pestles in this district, strangely enough, have the form of a projectile, and the pointed end is the working end.

Some of the arrowpoints and other things show very fine workmanship or interesting shapes; but there was only one specimen found on the lake-bed that really stands out as something unusual,

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very likely unique—the little effigy of a curious composite monster (fig. 14) carved from slate,

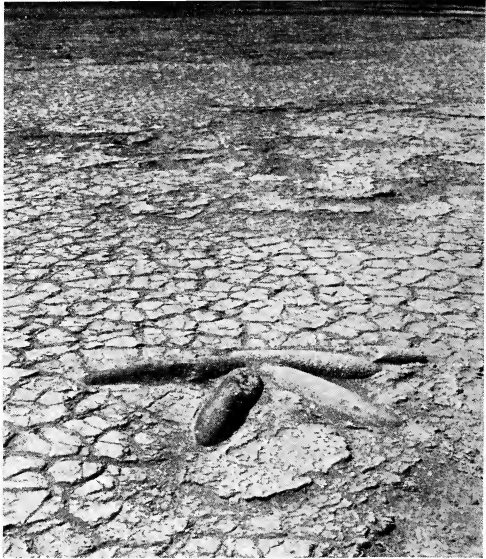


FIG. 13.—Cache of pestles, Humboldt lake-bed, Nevada

only three and three-tenths inches long and about eight-tenths of an inch in maximum thickness.

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As may be seen in the figure, the thing has the head and the fins of a fish with the markings and the tail of a rattlesnake—a neat piece of aboriginal carving. Mr. Loud, who was the lucky finder of the “rattle-fish,” agrees with me that it was probably a “doctor’s” charm, and this opinion was supported by “Skinny” Pascal, a Paviotso or Northern Paiute Indian who was working with us in the cave at the time.



FIG. 14.—Charm representing a composite monster, Humboldt lake-bed, Lovelock, Nevada. Length,  $3\frac{3}{16}$  in. (13/4115)

The charm has a smooth groove about the middle and another just forward of the tail, very likely for the reception of the thongs by which it was suspended, or attached to something.

M. R. HARRINGTON

## EXCAVATIONS IN COCLÉ PROVINCE, PANAMA

ALTHOUGH the prehistoric graves, or *guacas*, of Panama have been known since the time of

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the Spanish conquest and have yielded countless thousands of pieces of pottery and stone artifacts, as well as great numbers of gold ornaments, no scientific investigation of Panamanian archeology has ever been made until very recently.

In November, 1925, the author commenced excavations in Coclé province, which during the



FIG. 15.—Potsherds from Group 4, Penonome, Coclé, Panama, at beginning of excavation

six succeeding months yielded results of archeological interest and importance. An entirely new and unexpected culture was revealed, and although much research and comparative study will be required before definite conclusions can be reached, the results already obtained will add materially to knowledge of Central American archeology. Even a cursory examination of the hundreds of

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specimens obtained reveals strikingly unique characters, as well as remarkable resemblances to well recognized features of the cultures north and south of the Isthmus. Many of the subjects gathered might well have come from Mexico, others from northwestern South America, while most of them are of a type hitherto unknown.

A distinctive feature of the Coclé culture is the elaborate scroll decorations on the pottery. Not only is the scroll used in innumerable forms and variations in purely conventional designs, but in many cases it has been cleverly employed to produce realistic and yet conventionalized human and animal figures. Ceramic art had reached a very high state of perfection in this culture, and the forms, colors, and designs are most remarkable. Various shades of red and buff, as well as black and white, predominate, but purple and blue were used extensively. Many vessels were formed in two distinct layers of contrastingly colored clays; some are engraved or carved, others are beautifully fluted, and while plain pottery or monotone pottery with either raised or incised designs occur, by far the greater portion of the vessels are highly finished and elaborately decorated, and range in size from miniature jars to urns several feet in height and nearly two feet in diameter.

Also unique and remarkable are the sculptured

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stone figures or idols, and the huge stone columns. The figures, forming the tops of well-tooled



FIG. 16.—Fragments of columns at Groups 3 and 10, Penonome, Coclé, Panama

cylindrical or quadrangular columns, represent various animals and birds, as well as human beings,





FIG. 17.—Idols from Group 4, Penonome, Coclé, Panama

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and range from a few inches to nearly seven feet in length. Although the culture had reached a high degree of art in ceramics, and was far advanced in stone carving, still it was far behind in the art of making stone implements. Great numbers of these have been obtained, but with few exceptions they are of the most primitive types. Strangely enough, no gold objects have been discovered, the only ornaments found being stone and clay beads and labret-like objects of some polished black material. In several cases coloring materials or pigments have been found, such as red and yellow ochers, cinnabar, lapiz lazuli, and manganese, while fragments of brightly-colored agates and jasper were apparently pulverized to produce certain shades of pigment.

The area in which the excavations have been conducted is a level plain or llano lying between the Pacific coast and the Cordillera, a district cut by many streams, broken by occasional low hills or knolls, and, with the exception of the river bottoms, wholly unfit for agriculture at the present time. It is therefore remarkable that a vast population should have occupied this territory in the past, the more especially as apparently the prehistoric inhabitants were largely agricultural. Yet that this district supported a teeming population for a very long period is evident from

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the number of burials, the extent of village-sites, the size of kitchen-middens, and the enormous number of stone columns, idols, and ceremonial objects. Potsherds, stone artifacts, etc., are distributed over an area approximately fifteen miles in length by ten to twelve miles in width, and in



FIG. 18.—Idols from Groups 4 and 7, Penonome, Coclé,  
Panama

many places there is scarcely a spot within many acres where every stroke of pick or shovel will not reveal potsherds. For miles along some of the rivers, the banks for several feet below the surface are composed almost wholly of potsherds, while in many places burials are so numerous

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and so closely placed that good-sized mounds of sacrificed utensils and vessels have been formed.

The most extensive remains, and those which have yielded the finest and most interesting specimens, are the ruins of a vast temple-like structure situated on a level plain between the Rio



FIG. 19.—Altar with "alligator" or lizard, Group 4, Penonome, Coclé, Panama

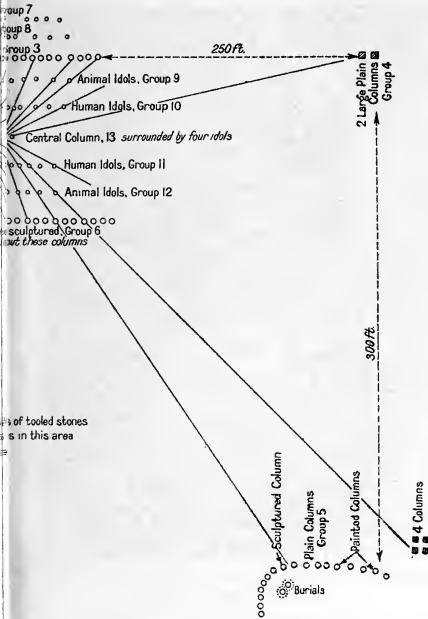
Caño and the Rio Grande. This so-called "temple site" covers an area of almost a hundred acres, but only the small central portion, of about ten acres, has been cleared of jungle and partially excavated. This portion consists of a number of rows of huge phallic columns of stone, arranged in a



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GROUND-PLAN OF TOMB

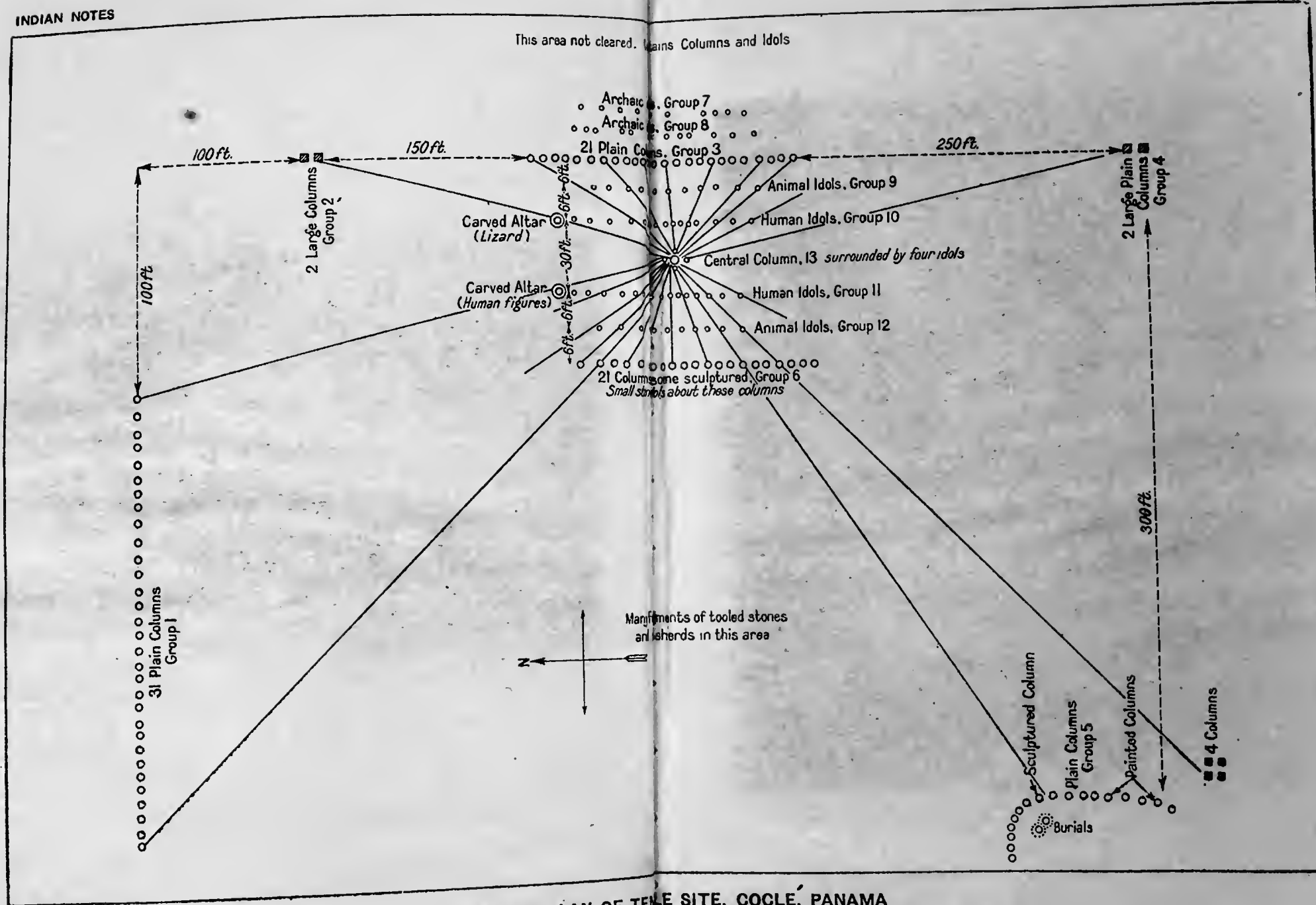
Columns and Idols



of tooled stones  
s in this area







GROUND-PLAN OF TENE SITE, COCLE, PANAMA



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quadrangle about a central column of great size. On each side of the rows of columns, extending



FIG. 20.—Idols and altar stone from Group 7, Penonome, Coclé, Panama

from north to south, are parallel rows of sculptured stone figures, rows of animal forms alternating

with rows of human forms, all facing eastward. Although many of the columns have fallen, many others have been broken, and still more are or were buried under several feet of accumulated soil, the general arrangement is readily traceable, and despite the changes that have taken place since the columns and idols were erected, it is



FIG. 21.—Squarish pottery vessel with annular base; red ware with white and brown painted decoration in fret pattern. Province of Coclé, Panama. Diam., 6.5 in.  
(13/1815)

evident that they were so spaced as to form lines radiating from the central column like the rays of the sun. Over this entire area, but particularly about the columns and idols, are immense numbers of potsherds, stone implements, and broken stone utensils and other artifacts extending from a few inches beneath the surface to a depth of ten or fifteen feet, and obviously “killed” or sacri-

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ficed. Indeed, in many cases the earthenware vessels have apertures made by stones thrown at them; frequently the stones are found in the midst of the shattered jars, and very often the stone images and columns bear marks of color made by the clay vessels thrown against them. Not only the earthenware, but stone implements, metates, etc., also were broken for sacrificial purposes. In many spots the pottery fragments are so densely packed and so numerous that they form fully eighty percent



FIG. 22.—Jar with incurving top; red ware with black and white painted decoration. Temple site, near Penonome, Coclé, Panama. Height, 10 in. (14/6560)

of the soil deposit, and so firmly have they become cemented by induration that they form a brick-like mass six to ten feet deep.

In the rear of a semicircular row of columns at the southwest of the site two secondary burials were found. The skeletons had practically disappeared, but impressions of the bones left in the

packed clay and a few fragments of teeth revealed the arrangement. The bones had been placed in small piles with the skulls facing the east, one burial on a legless metate, the other on a flat-



FIG. 23.—Jar of red ware with black and white painted decoration on neck. Coclé, Panama. Height, 5.75 in. (14/5150)

topped stone, and each surrounded by a number of miniature vessels, stone implements, etc. Nearby, traces of a third burial were found mingled with charcoal upon a flat-topped quartz boulder at the base of an incised column.

Such flat-topped boulders of jasper or quartz occur at the bases of all idols and columns, and apparently served the dual purpose of supporting the stone monolith and of providing a sacrificial altar. Unfortunately most of the stone images are badly broken, and while in many cases the missing

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portions were found, in most instances no traces of the missing heads, limbs, or bodies were discovered. This is due to several causes. Frequent fires have flaked and chipped all stonework projecting above the surface; every passing peon who saw a stone image knocked off the head and either wantonly destroyed it or carried it away, and the early Spanish priests gave orders that all pagan idols and images should be destroyed wherever found. As a result, only those idols



FIG. 24.—Inside of bowl with annular base; white ware with orange, red, and black decoration representing a human figure. From Temple site near Penonome, Coclé, Panama. Diam., 11 in. (14/6066)

which have been completely buried by the accumulation of soil have remained intact, and indeed many of these were found broken or decomposed.

The stratification at this site proves the antiquity of the culture. Superficially there is a layer of leaf mold and decayed vegetation from

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eight to ten inches thick, which grades into a true mold extending to a depth of about two or three feet; below this is a layer of hard sandy clay from two to five feet in thickness; under this is a layer of loose sand, from a few inches to several feet thick; and still lower is the deposit of sticky blue or yellow mud extending to unknown depths. The potsherds and other remains occur from near the surface to the mud stratum, but are most numerous in the upper stratum of hard clayey soil. Originally the lower end of every column and sculptured figure was embedded in the tenacious mud below sandy strata, but many of those still standing are buried so deeply that their tops are now from three to seven feet below the surface.

There appears to be little doubt that the people who left these remains were either destroyed or driven off by violent eruptions and accompanying earthquakes. About six miles from the temple site is the volcano of Guacamayo, which still shows slight activity, and in many places the burials and village-sites are covered with a layer of volcanic ash. Moreover, it is difficult to account for the peculiar conditions found at the temple site except by the theory of an earthquake of terrific intensity. Many of the largest columns have been broken squarely off and their parts tossed about, sometimes many yards from the



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bases and up-ended. Although deeply buried, many of the images were broken into many pieces, which were scattered far and wide—often a hundred feet or more apart. In one or two instances the figures were found completely inverted, and the upper half of a huge central column had been broken in three sections, which had been thrown in different directions, the uppermost piece lying beside but transversely to the remaining upright base, while the other two were several yards distant and pointed in opposite directions.

A. HYATT VERRILL

### EXPEDITION TO THE CANADIAN NORTHWEST

THE field-work commenced by the writer among the Cree Indians of the Canadian Northwest in 1925 were resumed early last summer. Eighteen Prairie Cree bands were visited in Saskatchewan during May and June, several of them on isolated reserves in the northern part of the province. Many utilitarian objects and several ceremonial bundles were obtained. Among the latter is the famous "Eternal Buffalo Bundle" containing a dried buffalo fetus papyracus. This sacred object has represented the buffalo and all that this animal has meant to these Indians in their ceremonies

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for many generations. The paraphernalia of the "smoking tipi" of Buffalo-Bull was also obtained, together with photographs and data.

Two Bush Cree bands were visited in northern Saskatchewan for the purpose of making a comparative study of Cree material culture. An interesting series of specimens with related data was gathered, so that the Museum now possesses as complete an ethnologic collection from these people as it is now possible to obtain.

The month of July was spent on six Assiniboin reserves in northern Saskatchewan and northern Alberta. Authentic ethnologic material was greatly needed from this tribe, and it is gratifying that many type specimens with descriptive information were gathered. Observations made while studying these people were of great interest, as they are a branch of the Yanktonai Dakota who for perhaps three centuries have been separated from the parent group, and although they have been closely allied and to a certain extent intermarried with the Cree, they have retained their old culture.

One Iroquois reserve in northern Alberta was visited, but so long a time has elapsed since these Indians traveled westward as *voyageurs* with the early traders, that no vestige of their own culture now remains.

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During August and a part of September work was commenced among the Northern Piegan of southern Alberta whose material culture had not been represented in the Museum. This branch of the Siksika or Blackfoot confederacy proved to be one of the most interesting tribes visited in the Canadian Northwest. The beginning of a representative collection was made, among the outstanding objects being several complete outfits of deerskin clothing for both men and women, an unusually large painted tipi, a horse travois, and several ancient bundles incased in painted buffalo-hide.

Several weeks of unusually wet weather were experienced during the early part of the season, but with the beginning of July dry weather prevailed, making it possible to cover several thousand miles. A total of twenty-three Indian reserves were visited in Saskatchewan and Alberta, and the Museum now possesses perhaps as complete a collection illustrating the ethnology of that territory as it is possible to procure.

Much of the success of the season's collecting was due to facilities afforded by the Indian Commissioner, Mr. Graham, of Regina, and to Mr. K. C. Miller, of Larchmont, New York, who accompanied the expedition as field assistant.

DONALD A. CADZOW

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### COLLECTION FROM THE CHANNEL ISLANDS OF CALIFORNIA

AMONG the more noteworthy collections recently procured by the Museum is that of Mr. A. R. Sanger of Los Angeles, who for thirteen years gathered archeological specimens on the Channel islands of California. The collection consists of about fourteen hundred objects fashioned from stone, bone, and shell.

A series of land and marine fetishes, for the greater part carved from steatite and serpentine of varying tints, are among the most interesting specimens in the collection. These images were evidently used by the islanders as charms in hunting and fishing, in much the manner that the Zuñi and other Southwestern tribes carved and used small stone animal fetishes to promote success in hunting. One of the island images, that of a small kid or lamb, made of gray steatite, is unusually well made.

Figurines of fishes and of sea mammals are the more numerous, probably because the natives of the islands, depending more on sea-food for their subsistence, believed that the spirits of the ocean would aid them more than those which guided the destinies of the mainland people. The porpoise is well represented in a number of fetishes,

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ranging from a realistic, well-defined one of dark serpentine to a number of tiny, rudely-made representations of the animal, the character of which is barely indicated by the peculiar shape and outstanding features.

Another animal, which is not a native of the California coast but which is plainly depicted in hard stone from its curving tusks to flippers, is the walrus. This fetish is truly a rarity. The animal is coated with red paint, and the primitive artist has so contorted the body as to give the impression that the intention was to represent the beast in its death throes.

Among the stone pestles in the collection, of which there are types ranging from the ordinary, short, and round ones of granite to those more long and slender, is one of light-gray sandstone, which, because of its unusual length and peculiar, carved, raised decoration, is particularly noteworthy. Probably it may have served some ceremonial purpose, for the workmanship upon it is such that the implement could hardly have been made solely for pounding seeds in the preparation of food. A large sandstone bowl, or mortar, with an overhanging rim, appears as if it might have been turned on a lathe, so perfectly is it finished. This receptacle may also have served some ceremonial purpose. In fact, it is known that among

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some of the Southern California tribes ceremonial mortars were used at certain periods of the year as vessels from which boys were made to drink a narcotic concoction of *Datura*, or Jamestown-weed, during rites of initiation, and it is not improbable that a similar custom may have been observed on the islands.

A stone implement unusual to California is the grooved ax. There is in the collection one such tool, which was discovered on Santa Catalina. This implement and a polished celt, both of hard stone, are strangers in the collection, and probably found their way to the islands through trade with tribes farther east. The stone and shell beads are also worthy of notice, because of their variety and workmanship.

The bone implements are varied and unusually well preserved. Some are ornamented, in the usual Channel Island fashion, with bits of abalone-shell set in bitumen.

An oddity in the skeletal material is an entire skeleton that had been buried in a flexed position in sandy soil which became transformed into a kind of sandstone matrix. The bones are stained red, either from pigment thrown into the grave at the time of burial or from the body-paint on the corpse at the time of death. An arrow-head protruding from a cervical vertebra shows

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plainly the manner in which the deceased met his fate.

There is also a fine series of problematical objects fashioned from steatite, serpentine, and sundry hard stones, ranging from large, well-made, highly polished, hook-like objects to small, crudely made specimens, scarcely recognizable as being related to the larger ones, and perforated for suspension as pendants. Various uses have been ascribed to these hook-stones which are found only on the Channel islands and the adjacent mainland, but as yet no one has been able to determine their purpose satisfactorily.

Numerous nicely shaped pipes, variously made of serpentine, sandstone, steatite, etc.; ceremonial objects of odd shapes and sizes; digging-stick weights, some showing well-worn surfaces where the inner lip of the stone ring was abraded by the stick, and other objects, principally of steatite, of unknown use; shell fishhooks; ornaments of haliotis-shell; entire abalone-shells, their gills plugged with bitumen, the cups of the islanders, in some cases the receptacles thus made having served as paint-cups which still retain their contents of red, yellow, and brown mineral pigments—are among the specimens worthy of special mention.

ARTHUR WOODWARD

## INDIAN NOTES

### A NOTE ON INDIAN CEREMONIES IN GUATEMALA

QUICHE dances have rarely been witnessed and little studied by ethnologists, although the field for investigation is fully as important as that of Pueblo dances. Certain features in common between the two regions, such as ceremonial burlesque, may be noted. In Guatemala the native population have been more accessible and liable to interference than our Southwestern Indians, who dwell in what was not long ago a distant frontier. And so in Guatemala the natives had to modify some features of their dances to accord with ecclesiastic exigences. As a result pagan religious ceremonies of the utmost sanctity may be cloaked with a European guise. The intervention of our own Government to modify the rites of the Southwestern Indians and the establishment of missions by force has there in recent years given rise to the same procedure. Some Indian villages, like Tesuque, through proximity to white settlements, have radically changed the external appearance of ceremonies, though in no wise abandoning their ancestral beliefs. On the other hand, in Guatemala some religious performances, such as the Baile del Tun, were entirely forbidden by the church after the Conquest, and



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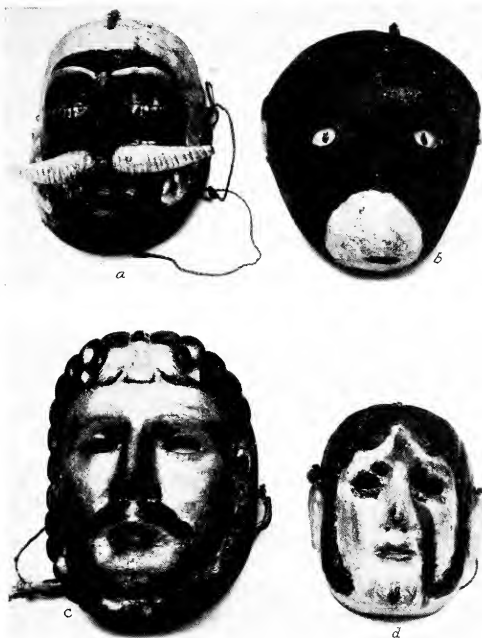


FIG. 25.—Quiche dance masks, Guatemala. *a*, The Black One (14/5616); *b*, Dog (14/5615); *c*, Cortés (14/5622); *d*, Wounded Indian (14/5621). Heights, 6.25 to 8.75 in.

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were performed only in secret until the advent of Guatemalan independence in the nineteenth century. In such dances probably little change has taken place since the royal Quiche house of Cavek reigned in Gumarcaah.

The most frequently witnessed dances in Central America today are historical pageants representing such subjects as the wars of the Moors and Christians, or Jews and Philistines. One of the most popular, curiously enough, is the Baile de la Conquista in which Cortés (fig. 25, *c*) is represented as defeating the Indians. Masks, such as fig. 25, *d*, are used to portray the dead and wounded natives (*caminak*, the dead ones). These dances form the public part of ceremonies lasting several days. Of what goes on in private we have no knowledge. Similar dramas based on purely native themes are known to have existed and may still exist. One, the Rabinal-Achi, has been recorded and published by Brasseur de Bourbourg.

The mysterious Baile del Tun was, as we have said, forbidden during the colonial epoch. The word *tun* in Quiche means literally a hollow tube, hence a trumpet or the slender wooden drum beaten on the side, known by the Aztec as *teponaztli* and by the Maya of Yucatan as *tunkul*. However, in connection with this dance it apparently has some esoteric meaning which could

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not be ascertained beyond the fact that it was said to partake of the nature of the *brujo* (shaman) and was *como idolo en el monte* (like an idol hidden in the forest).

The Tun mask (fig. 26) represents a young flesh-colored face framed by golden hair. On the back is worn a wooden plaque (fig. 27) on which, carved in high relief, is a hollow tube supported by two heraldic-like figures. The



FIG. 26.—Tun mask, Quiche Indians, Guatemala. (14/5617)

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dancers go in pairs united by an arched sapling, the ends of which are inserted in the tubes. The size of the arch is about that of the sweep of the arm. It is adorned with twenty or thirty bunches of feathers dyed a brilliant crimson. This peculiar

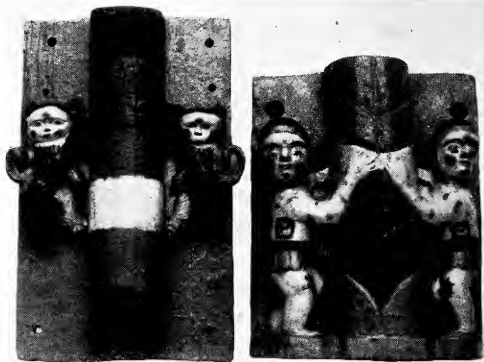


FIG. 27.—Shoulder plaques of Tun costume, Quiche Indians, Guatemala. Heights, 15 and 12 in. (14/5617)

dance is held in San Juan Mixcoi, Nebaj, Santo Tomás Chichicastenango, Chajul, Cotzal, and perhaps elsewhere.

Numerous other characters appear in Quiche dances at various festivals and in diverse towns.

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FIG. 28.—Quiche dance masks, Guatemala. *a*, *b*, Monkey (14/5612); *c*, Jaguar (14/5614); *d*, Puma (14/5613). Heights, 6.25 to 8 in.

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Among these we illustrate (figs. 25, 28, 29) El Diabolo, the Black One (*Ek*), Puma (*Balam*), Jaguar (*Cob*), Monkey (*Koi*), Dog (*Tzi*), Bull (*Uakash*), and Deer (*Masat*: note the Nahuatl). The symbolism and uses of these are too complex to warrant discussion without further study.

Perhaps the most picturesque of Quiche ceremonies is the performance known as Voladores, or Fliers, which the writer was fortunate enough to witness in Santo Tomás Chichicastenango. For this a great mast (fig. 30, A) is dragged to the plaza, and a small frame (B) is lashed near the top. On the sixteenth of December it is set up before the principal church, with a young man clinging perilously to the cross-bars of the frame. This lad, who wears the mask and costume representing a monkey (fig. 28, *a*, *b*), has then to haul up and secure the ladders used to ascend the mast. So tall was the tree in 1925 that no fewer than five ladders, each fully twenty feet high, were necessary. A swinging rectangular frame (fig. 30, D), suspended from a socket on the top of the pole (E), is next raised into place. Two ropes (F), long enough to reach the ground, are then wound tightly around the top of the mast, and their ends, tied in a loop, are passed over the sides of the swinging frame.

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Everything is now ready for the performers, who climb the pole in pairs, seat themselves in the looped ropes, and swing off together into space. The pull of gravity causes the ropes to unwind and gradually lower the men to the ground, but centrifugal force makes them swing out in a wide arc. At times, especially when a pair of dis-



FIG. 29.—Quiche dance masks, Guatemala. *a*, Bull (14/5611); *b*, Deer (14/5610). Heights, 8 to 10.5 in.

parate weight descend together, the pole sways most dangerously. Some years ago in Chichicastenango they say a pole fell and killed those who were descending. Yet the people seemingly have little fear, and as the ropes unwind a third man ascends the mast to quicken their speed by pushing on the revolving frame.

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In Mexico among the Aztec in the old days this curious mixture of religious pageantry and divertimento was held in the month Xocohuetzi.

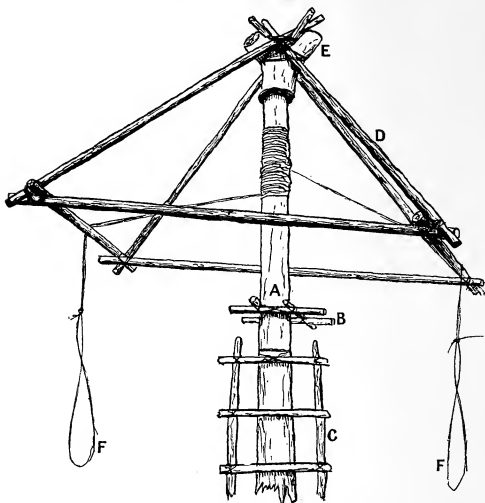


FIG. 30.—Voladores mast, Santo Tomás Chichicastenango, Guatemala

Descriptions may be found in the Codex Magliabecchiano and in the writings of Duran and Sahagun. Oviedo, in a detailed account of a similar



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ceremony in Nicaragua, tells that the descent took as long as it might to say the credo five or six times, which is equal perhaps to the four and one-half minutes consumed at Chichicastenango. Symbolically the ceremony evidently represents the dispatch to earth of messengers from a god, whose image in pagan days surmounted the tall mast. Today, and perhaps in olden times as well, the pole remains standing for some time after the ceremonies are finished, so that adventurously minded young men may avail themselves of the chance to "fly." In Chichicastenango this privilege is purchased for a sum equivalent to eight cents in our money.

In January, 1926, a journey was made to the town of Esquipulas in southern Guatemala in the hope of securing ethnological specimens, but the fair held at this time is now almost completely Europeanized. However, to witness the crowds of pilgrims who passed through the single narrow street of the town to prostrate themselves before the Black Christ was a most interesting spectacle, for some had come from such distant lands as Ecuador and Mexico.

The "*verdadera imagen*" is a black wooden statue about five feet high. It is said to have been carved by one Quirio Cataño in 1595. Soon

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after its completion miraculous cures were noted among those who prayed before it, and its fame increased steadily until the end of the nineteenth century. As many as a hundred thousand are said annually to have visited the sanctuary until the Guatemalan government imposed passport restrictions with which the poor Indians were unable to cope. Today about 40,000 are said to come—an extraordinary number when it is remembered that all easy means of transportation end far away and that the accommodations are of the crudest. In fact the journey must kill as many as it cures, for the overcrowded town becomes a vast latrine at pilgrimtide, and most of the people seen on the road are sickly from filth, fatigue, poor food, and exposure.

To the ethnologist Esquipulas is of interest because it attests the survival of a pre-Spanish cult. As to the color of the sacred image, black in Middle America has been considered divine, sacred, and holy from time immemorial. Among the Aztec black was used by the priests (except the scarlet-clad sacrificer) for body paint, for robes, and for cap. Among the Tzental was found the Lord of the Black Ones, Ycalahau, who, according to the bishop Nuñez de la Vega, was much venerated in the town of Oschuc. In Guatemala the English priest Thomas Gage de-

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scribes the finding of an idol, "black shining like jet," which was worshipped by Pokoman Indians. Among the Maya of Yucatan, according to the bishop De Landa, the Bacab of the Cauac years was called Hozanek (Black Uprooter), Ekel-Bacab (Black Bacab), Ekxib-Chac (Black Male Chac), and Ekel-Pauahtan (Black Stone Raiser). Black was applied also to the Lord of the intercalendary days, Ek-u-Uayeyab. The Cauac years were thought by the Maya to be unlucky, and four deities were called on for aid. Among these was Ek-Balam-Chac, the Black Rain Puma. In addition the Maya venerated a war-god known as Ek Ahau, the Black Lord, who was served by seven black retainers. This deity has been identified as God F of the Maya codices. He was thought to have governed death by violence in all forms, including sacrifice. He is comparable to the Aztec Xipe. Also the Maya worshipped Ek-chuah (Ek-chouac? = the Tall Black One) who was the protector of merchants, travelers, and pilgrims. He is identified as God M of the codices. Today, among the Quiche of Guatemala and the Pipil, Lenca, and Cacaopera of Salvador, they still celebrate the Baile de los Negros, in which the chief character is Ek, the Black One (fig. 25, *a*).

In view of the universal ceremonial significance of black, one readily comprehends how avidly

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the Indians received the worship of a Black Christ. The fact that the sanctuary of Esquipulas is little more than a day's journey from Asunción Mita, to which pilgrimage had been made by the natives from time immemorial, no doubt facilitated the spread of the Esquipulas cult.

There are several indications that the Indians even today do not regard this Esquipulas cult as entirely Christian. To begin with, they all know that Christ was a Jew and therefore not a black man, so clearly there must be some occult significance to their worship. Many of the minor offices of the sanctuary, such as sweeping and swinging censers, fall to the charge of Quiche Indians, descendants of the ancient priesthood and nobility, who now dwell in the towns of Nahuala and Santo Tomás Chichicastenango. Today in Nahuala no Christian priest (or even a white man) is allowed to reside, and in Chichicastenango a priest is tolerated only if he does not interfere with native pagan ceremonies. Clearly these Indians, who have little or nothing to do with the church at home, do not make the long journey to Esquipulas because they regard the cult as Christian. A further token of the native character of the rites consists of five large stone carvings from Copan—easily identified by the characteristic color of the stone—which have

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been set up on the bridge in front of the sanctuary at Esquipulas. Two of these sculptures portray great jaguars or pumas. Is it not probable that they represent Ek-Balam-Chac, the Black Rain Puma, among the Maya venerated as a beneficent deity of the Cauac years? In Middle America, even as centuries ago in Europe, the church has had to compromise and extend its mantle over the paganism it could not extirpate. Such hybrid ceremonies as the cult of Esquipulas are the result.

S. K. LOTHROP

### OATH-TAKING AMONG THE DAKOTA<sup>1</sup>

SOMETIMES debates or controversies arose among the people. Those who were thus contending might invoke some mysterious Power to witness the truth of what they said, or were about to say. It was believed if one spoke falsely in such a case he would suffer for it, perhaps by death. Such an invocation might be in the words "They hear me!" By "they" he meant the Thunderers. If one who took oath in this form spoke untruth it was believed that some time he would be killed by lightning on that account.

<sup>1</sup> Translation, obtained by Dr. Melvin R. Gilmore, of one of the texts (No. 240) of George Bushotter in the archives of the Bureau of American Ethnology, Washington.

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Another form of oath was by imprecation on a knife. The one who testified in this manner would take into his mouth a knife-blade. It was believed if he spoke falsely he would perish by a knife.

Another form of oath was to say, "The horses hear me!" It was believed if he then spoke falsely he would some time after be thrown by a horse and killed, or he might be kicked or trampled to death by horses.

Another form was to say, "Earth hears me!" It was believed that if one then testified falsely he would meet death in some terrible form, and his whole family might suffer with him, from sickness or some other calamity.

In these and similar ways the Dakota used to put themselves on oath. So they believed and so they practised. They believed when they said such words that the Powers they invoked surely heard them. It was believed that if one spoke only in a whisper, yet the Powers heard. It was believed that if one swore falsely he would suffer, but that if he spoke the truth he was in no danger of harm. One who took oath was very careful of his words for fear and awe of the Powers he invoked. He feared and honored these Powers.

They did not take oaths lightly, but only to make solemn assertions. If a person took oath in

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trivial matters, swore vainly, it was believed he would be punished in some way. They never lightly called on any mysterious power.

### ARAPAHO MEDICINE BUNDLE

DURING a visit to the Arapaho Indians of Wind River reservation, Wyoming, the writer obtained an interesting and ancient medicine bundle, but with only great difficulty was information regarding it recorded. It was learned that Rambling-Woman, then about eighty-five years of age, was the only person in the tribe who was able to reveal the story of the bundle, a fact that caused the old woman to realize her importance in this regard. After several days of coaxing she was prevailed on to impart the following incomplete information:

Once, when a great many Indians were camped together, a fight occurred in which a man killed a fellow tribesman, with the result that the murderer became the subject of general hatred. At this time the game apparently left the country; meat became very scarce, and the camp blamed the murderer for this misfortune. Sometimes many buffalo were seen in the distance, but when the young man started to pursue them with the other hunters, they were never able to get close enough

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to kill any. The keener the suffering from hunger, the more the murderer was blamed, until ultimately he was told that the best thing for him to do was to depart with his family and camp away from the main village. Therefore, pulling down the tipi the next morning, he and his family traveled for a long time until they came to a little river bordered with roseberry bushes. Here they camped, subsisting on the berries, being unable to obtain meat.

One day the man determined that he must find some meat for his family, so went out on a hunt. He traveled for a long while, looking in vain for game, but finally saw something coming far in the east, which proved to be a buffalo bull. He gave thanks to the Great Spirit, for he would soon have something to eat for himself and his family. He now wished to chase the buffalo and kill it, but on his approach it changed to a buffalo heifer. When the animal was within shooting distance, the man drew his bow, but the heifer spoke to him, telling him to leave her alone; so he put down his bow and arrow. But he thought of his wife and children, and how they would enjoy some fresh buffalo meat, for he knew how hungry they were. The heifer had stood still, so he picked up his bow and arrows and killed her.

He butchered the young cow, cutting all the



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meat from the bones, then opened the stomach. He found it had something unusual within. At first he thought it was a calf, but discovered a big snake. This snake was afterward called "Big Water Snake." The serpent, however, so frightened him that he ran away, not even daring to touch the meat. He ran a long distance, then on looking back saw the snake rise and watch where he was going. The man ran till dark, when he reached his tipi. He went to bed, but could neither sleep nor forget what had happened. He did not relate his experience to his wife, but late that night he began to feel strange, as if something heavy was lying on him, and yet he did not dare move. He told his wife to get up and make a fire, and when it burned brightly the woman looked around and saw the big snake coiled up just in front of the entrance. She screamed and jumped in bed, hiding behind her husband. He told her, however, to get up and cover the snake with the best robe they had, which was a white buffalo robe. The woman covered the snake, then returned to bed and sleep.

Later the woman awoke and told her husband that she heard a great noise and felt anxious. They listened, and were convinced that the commotion came from a great many buffalo all around the tipi. They could hear them walking, almost

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stepping on the tipi. In the morning the man told his wife to peep out the door to see what really was there. The snake was gone, but when the woman looked out, she saw many buffalo. Her husband immediately arose, took his bow and arrows, and began to shoot the buffalo. He shot many before they commenced to go away; then he told his wife that they must work hard to finish the butchering.

They had to skin all the buffalo he had killed, slice the meat and dry it, and stretch the hides. They worked diligently and finally finished their labors. Immediately afterward the man began to make a great many arrows, while he told his wife to make as much pemmican as possible.

After the meat was ready, her husband went afoot to the main camp, carrying on his back the meat his wife had prepared. Arriving near camp, he began to cry, and proceeded through the village to the tipi of the chief. As he walked he heard many remarks, from which it was plain that the people still hated him. Entering the chief's tipi, he put down his load and offered it to the chief. When he saw what the hunter had brought, the chief sent for the camp-crier and called to his lodge all the chiefs of the tribe. They had a big feast, eating as much as they wanted, yet there was enough left to feed all the

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women and children; and even after they had eaten, the rest of the tribe was called in. It seemed that the quantity of meat which had been brought did not lessen, so long as there were hungry ones to feed. Not until all the camp had been sated did the last of the meat disappear.

The murderer then asked the chief to call together all those who were members of the society to which he belonged. At this assembly he renamed the society, calling it *Nananehane*, a word of unknown meaning. Then the murderer asked the old men to use their influence to have the camp moved to the place where he had killed the buffalo, saying that he would there give them the Fifth Dance, and that he had enough meat to feed the whole tribe. The camp consequently was moved, and when the band arrived at the lone tipi of the murderer, he distributed meat to everyone, and gave robes and arrows to his friends.

He now instructed the members of his society to build a lodge. The tipi poles were spliced two and two together, bound with rawhide, so as to make a tipi twice as tall as the usual ones. Many hides were necessary to cover the poles, and no door was provided, entrance being gained by raising the side wall. Only the members of the society were permitted to enter.

During the ceremony that followed, the sacred

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bundle was made, together with nine other bundles. These were called "Ten Bundles," or "Bear Bundles," and in praying to them they were addressed as "Tens."

During the ceremony the owners of these bundles recline against a back-rest, facing the bear-claw ornaments which are put up on sticks in front of their feet. While the ceremony is in progress they are not supposed to look at anything save these claws. The band to which the claws are fastened is the symbol of the "Big-Water-Snake." The ceremony lasts four days, during which time, once each evening, the members are allowed to eat and drink. At times they act and dance in imitation of prairie chickens, and during the buffalo songs they simulate buffalo.

From this Fifth Dance Society were selected the oldest men, who formed the "Water-Sprinkling-Old-Men Society." Only those were eligible who passed through each lower society and could instruct its members.

WILLIAM WILDSCHUT

## AN UNUSUAL HAFTED FLINT IMPLEMENT FROM NEVADA

AMONG the varied collection of curious odds and ends left by the forgotten peoples who worked

## INDIAN NOTES

the ancient salt-mines near St. Thomas, Nevada, one of the most unusual is the well-worn flint implement, still equipped with its original deer-antler handle, shown in fig. 31. This was dug from its dusty bed in the mine refuse forming the floor of the northwestern part of the largest chamber in Salt Cave 1, about two feet from the surface, during the course of our exploration in the fall of 1925.

The implement consists of a prong of deer-antler four inches long by about six-tenths of an inch thick at the base, where a broad V-shape notch has been cut to receive a short stubby chipped blade of grayish flinty material, worn and resharpened by chipping until there is very little left of it, and held firmly in place with pitch.

Mr. C. O. Turbyfill of the Museum, who was in immediate charge of the excavation when the spec-

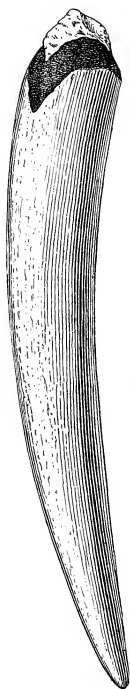


FIG. 31.—Hafted flint implement from Salt cave, Nevada. Length, 4.5 in. (14/5952)

## INDIAN NOTES

imen was found, thought at first that the flint part was merely the broken remnant of a full-size knife. Closer examination, however, shows that the thing is a complete implement as it stands, or, at least, that it was used in its present condition; for the flint bears signs of wear even since the last resharpening, and a small piece of the surface as it was *before* this resharpening took place is worn round and even polished from use. And curiously enough, the parts of the antler handle which come nearest the blade exhibit similar wear, and the very pitch holding the flint in place is worn and almost polished.

What such an implement was used for remains uncertain. If it were not for the wear showing around the blade, on the pitch, and the antler of the handle, one would think it some sort of a graver, intended for cutting grooves in wood or bone, either as part of some shaping process or as decoration. But the wear shows that it must have been used, part of the time at least, for cutting some material like skin, which would bulge up on each side of the blade and rub the adjoining parts of the handle.

Skins of large animals seem not to have been used very extensively in this desert district, as deer and mountain sheep were scarce and hard to get. But jack-rabbits and cottontails were abun-

## INDIAN NOTES

dant, and their skins were in great demand as blanket material. So probably our implement was employed chiefly for cutting rabbit-skins into strips preparatory to winding them on cords, and weaving the fluffy, furry rope thus produced into warm and comfortable blankets.

From the fact that it was dug out well below the surface in a layer yielding pottery similar to that found at Pueblo Grande de Nevada, the chances are that this hafted flint implement was made and used by the same early Puebloan people that occupied the "Lost City" and that operated the ancient salt-mines so extensively. It is always unsafe, however, to base conclusions on a single specimen—the chance always remains that the implement worked down from the surface, and in that case it would be of later, probably Paiute, origin.

M. R. HARRINGTON

### HECKEWELDER TO DUPONCEAU, 1820

WITH a copy of John Heckewelder's *A Narrative of the Mission of the United Brethren among the Delaware and Mohican Indians, from its Commencement, in the Year 1740, to the Close of the Year 1808*, published by McCarty and Davis in Philadelphia in 1820, and republished by The Burrows Brothers

## INDIAN NOTES

Company at Cleveland in 1907, under the scholarly editorship of William Elsey Connelley, the Museum recently acquired an interesting holographic letter addressed by Heckewelder to Peter S. Duponceau, the philologist, which is here reproduced for the purpose of supplementing the extended information regarding the history of this important work presented by Mr. Connelley, who owns (or owned) the original manuscript used in printing the *Narrative*.

Bethm. 4<sup>th</sup>. May 1820

My dear friend

Having a good private Opportunity of forwarding to Mr. Kampman for You, the long promised Manuscript in the Mahicanni Language, I embrace it. I had the loose leaves bound together for fear that some might be lost—Yet the whole is not much, as all that which was by the author intended to fill up & compleat it, was destroyed by his Children afterwards—My intention had been to have made some remarks on this Language—such as had fell to my notice, as I once could understand it well, but my time at present will not allow it, however I will try to do it hereafter. The Language is L. Lenape yet, many words vary in writing and pronunciation—frequently where the Del. have the letter *l*, these make use of the letter *n*. &—You will often find the *esta*, or *eschta*, which is the proper word for *no*—(where the Del. say: *matta* for *no*) that the Mohicans barely say: "sta"—for "yes"—they have *Guami*—

I have retained one collection of words, of the same Language, for the purpose of being able to remark thereon when I shall find leisure. but at present I am wholly employed in copying Zeisbergers Translations of the 4 Gospels for the press, who are anxiously waiting for it at New York—

The *title* to my *Narrative*, as you proposed to me, meets my full approbation. I wanted it *short*, and *plain*, after the manner you propose. But permit me to state, why I mentioned in



## INDIAN NOTES

my last, that I wished the Narrative returned to Mr. Roberts Vaux for *him* to put it into the Printers hands. This Gentleman, together with Mr. Hembell, had last year interested themselves much in my behalf, to have the Narrative published by a *trusty* printer—and to make the best contract they could with the printer for *me*. This they effected to my satisfaction, and Mr. Vaux kindly undertook to *correct* the proof sheets, he living *near* the Printers, it was far more convenient for him to attend to this, than for Mr. Hembell who lived so far off—To throw the work upon a printers hands without knowing of a person who was willing, & had the *leisure* to correct the Sheets as they came from the press: I could not content myself—even in attention to *dates*—or the *figures*—by misplacing which, the whole work would become worthless: was with me a consideration—and as I could not impose on Your goodness—and knowing how *precious* time was to You—I had no other alternative, than either to attend myself, during the printing of the book; or to accept of the kind offer made me by friends for the purpose.

The Narrative would undoubtedly have been printed in the fall of the Year 1816, had not my friend Dr. Wistar dissuaded me then, from having it published *out of this State* & A Dr. Stringham of New York had then offered both to correct the grammatical errors &—and also the Sheets as they should be struk off. He had also at that time noticed the book in one of the daily Newspapers of that City.

It would have been quite agreeable to me—nay it had been my wish, that the Narrative could have been arranged, or put in Chapters—but rather than to impose upon a friend, who had already done me so many favours: *additional* labours; I wish it to go as it is. It will read as a Diary—& that is, what it properly ought to be—

My Daughter joins me in best salutations to You & dear family as also to friend Malenfant.

And believe me ever Your sincere friend

J<sup>no</sup> Heckewelder—

The Mahicanni (Mohegan) manuscript referred to is doubtless a "Vocabulary of the Mahicanni language, taken down from the mouth of one of

that nation who had been in Connecticut," a copy of which, by Duponceau, is preserved in the library of the American Philosophical Society at Philadelphia, and forms No. XV of a collection made by him and recorded in a folio account book, in which it occupies pages 60-61. It contains about 150 words, and is arranged in four columns to the page—two in English, two in Mahicanni. (Pilling, *Bibliography of the Algonquian Languages*, p. 227.)

Rev. L. F. Kampman was a missionary to the Delawares at New Fairfield, Canada West, in 1840 to 1842.

Zeisberger's "Translation of the 4 Gospels," referred to, is no doubt *The History of Our Lord and Saviour Jesus Christ: Translated into the Delaware Indian Language*. New York: Printed by Daniel Fanshaw, No. 20, Slote Lane, 1821. This work was reprinted at the Shawanoe Baptist Mission in the present Oklahoma in 1837, on the basis of a retranslation by Ira D. Blanchard, "so as to conform to the present idiom of the language." Zeisberger died at Goshen, Ohio, November 17, 1808, aged 87 years.

Endorsed in pencil on the reverse of the Heckewelder letter is the note: "I think it will be best to print without Chapters, by this letter the author seems to prefer this course R Vaux"—

## INDIAN NOTES

the Roberts Vaux (1786-1836), jurist and penologist, mentioned in the body of the letter.

It may be assumed that the Dr. Stringham mentioned was Dr. James S. Stringham (1775-1817), an eminent physician of New York City, professor of chemistry and of medical jurisprudence, and an efficient promoter of science.

Mr. Hembell is mentioned both as Hembell and Hemble in the communication of William McCarty, of McCarty & Davis, the publishers of the *Narrative*, dated Bethlehem, May 30, 1819, in which is set forth the terms of publication. This letter was borne by Mr. Hembell or Hemble and is published by Mr. Connelley (p. ix).

Dr. Wistar was no doubt Dr. Caspar Wistar (1761-1818), who succeeded Thomas Jefferson as president of the American Philosophical Society in 1815. The Wistar Institute of Anatomy and Biology of the University of Pennsylvania was named in his honor, as also was the climbing shrub "wisteria," the original misspelling being retained by botanists, who seem to regard the correction of a typographical blunder in botanical names as an unpardonable offense.

F. W. HODGE

## INDIAN NOTES

### THE MUSEUM'S NEW BUILDING

A RECENTLY completed storage building, or, as it is generally called, the "Bronx Annex," is the first unit of what ultimately will be a very large structure to be erected on the triangular plot, owned by the Museum, bounded by Eastern boulevard, Middletown road, and Jarvis street, in the Bronx. The building was taken over from the contractor on November 15th, which chanced to be the fourth anniversary of the public opening of the main Museum building at Broadway and 155th street.

Situated in the center of the Eastern boulevard section, the new structure is sixty-five feet wide by one hundred feet long and three stories in height. It is faced with Harvard brick, trimmed with limestone, and is fireproof in every respect.

The design of the entrance is architecturally unique, as the accompanying illustrations show. The carving of the sides represents various Indian artifacts, while that of the lintel indicates Mexican motives. Within the outer door-frame are two cedar posts and lintel from a Kwakiutl house of Vancouver island.

On entering the building, to the right are the quarters to be occupied by the Department of Physical Anthropology, consisting of the labora-

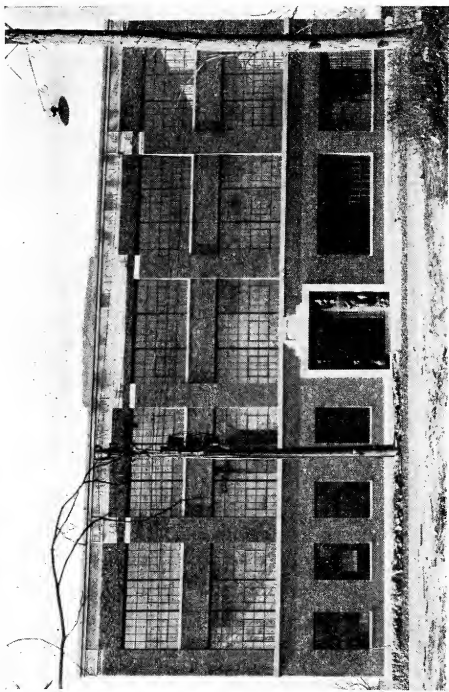


FIG. 32.—The new storage building of the Museum



FIG. 33.—Entrance to the new storage building of the Museum

## INDIAN NOTES

tories and a hall for the exhibition of somatological material. To the left are the quarters of the superintendent, together with the boiler room, and the carpenter, machine, and repair shops.

The second floor consists of seven storage rooms for ethnological collections, equipped with movable steel shelving. As the height of the story is fifteen feet, ample space for large objects is afforded.

The top floor, to be devoted to archeological material, will be fitted with metal storage vaults provided with drawers and trays similar to those at present in the main building.

The removal of the collections has been commenced, and it is hoped that by spring this large task will have been completed. Almost from the time the main building was opened to the public, in 1922, the collections have increased so greatly that only with difficulty has it been possible to carry out one of the chief functions of the Museum, namely, to afford to serious students every facility for study. But with the completion of the first unit of the new building and the transfer of the greater portion of the collections thereto, the resources of the Museum in this and in other directions will be very greatly enhanced.

GEORGE G. HEYE

# INDIAN NOTES

## RECENT ACCESSIONS BY GIFT

*From Mr. Howard M. Chapin:*

Twenty-five arrowpoints. Rhode Island.

*From Mr. E. C. Carter:*

Nineteen chipped blades. Stockbridge, Mass.

*From Mrs. David B. Ogden:*

Basket. Diegueño, California.

Small basket. Tulare, California.

Basket. Makah, Washington.

Basket bag; cylindrical basket and cover. Nootka.

Two openwork baskets.

*From Mr. John Jensen:*

Quartzite arrowpoint. King's Woods, Weehawken, N. J.

*From Mr. Daniel Carter Beard:*

Twenty-two photographs.

*From Mr. John Bristow:*

Grooved stone ax; seven quartz projectile points. Narragansett, R. I.

*From Mr. Ernest Schernikow:*

Stone arrow straightener. Butte county, California.

*From Mr. Merl La Voy:*

Whalebone net; three steatite fragments; one hundred seventy-six scrapers. Eskimo, Point Hope, Alaska.

*From Mr. Richard Dayton:*

One hundred waterworn hammerstones. Pound Rocks, Stamford, Connecticut.

*From Dr. F. G. Speck:*

Pipe, Eskimo of Fort Chimo, Labrador.

*From Miss Grace Nicholson:*

Twelve photographs.

*From Mrs. Rachel L. Wing:*

Medicine-bag made of loon-skin. Cree.

*From Rev. Douglas L. Rights:*

Lot of deer-bones; seventy potsherds; mussel-shell. Walnut Cove, N. C.

*From Mrs. Alice J. Pix:*

Jar. Acoma, New Mexico.

*From Mrs. Thea Heye:*

Two photographs.

*From Mr. T. P. O. Menzies:*

Four photographs.



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*From Mr. George Stevens:*

One hundred and sixty-eight arrow, spear and drill points; twenty-four grooved sinkers; five pitted stones; adz; sinew stone; crude celt; six hoes; twenty-four notched sinkers; pitted, notched sinker; two hammerstones; fourteen worked stones; five pestles. Island of Rhode Island.

Two hundred and sixty-seven arrow and spear points; twelve sinkers; fifty potsherds; pitted stone; five celts; three gouges; eight grooved sinkers; hoe; three celt ends; two hammerstones; six worked stones; forty-five fragments of steatite; two hundred slate blanks and rejects; one hundred quartz blanks and rejects. Island of Conanicut, R. I.

Pestle. Tewksbury, Mass.

Worked bear's tooth; steatite ceremonial stone; small grooved sinker; three potsherds. Jamestown, R. I.

Gouge. Newport, R. I.

*From Dr. Edgar S. Thomson:*

Photograph.

*From Mr. Harold E. Gillingham:*

Three photographs.

*From Prof. Paul Hambrouch:*

Two casts of monolithic axes from Honduras.

*From Dr. George Bird Grinnell:*

Skeletal remains found near the Museum site in New York City.

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## NOTES

FOUR complete burial urns, a pipe, some charred netting, and a few stone implements and other articles have recently been received from Mr. J. W. Mykrantz of Ramona, San Diego county, California. Mr. Mykrantz uncovered these objects while making some excavations for this

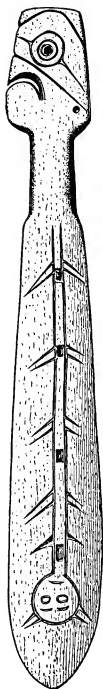


FIG. 34.—Nootka bone club. Length, 22 in. (14/763)

Museum at his San Vicente rancho, on an ancient village and burial site hitherto undisturbed by the spade of the investigator; and his account of his findings will appear in the next number of *Indian Notes*. With the same shipment were four interesting and unusual perforated stone pendants, or tablets, previously found nearby, which Mr. Mykrantz has kindly presented to the Museum.

TWO EXCELLENT bone clubs of the Nootka Indians of Vancouver island, with engraved ornamentation on their blades, were procured in Paris by the Director last summer. The head of each of the clubs is fashioned to represent the head of an eagle in profile, while each side of the handle is carved in representation of a human being, as shown in fig. 34. The eye of the eagle and the four oblong depressions in the body of the human figure on each side of the clubs retain remains of a dark, gum-like substance, as if these spaces

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had been ornamented with inlays, such as abalone-shell.

A JADEITE CHISEL from the Salish of Fraser river, British Columbia, unusual by reason of its length of nearly sixteen inches, has been added to the Museum collection of similar materials, already noteworthy on account of its Emmons collection from British Columbia and Alaska, an illustrated description of which was published by the Museum in 1923.

A COLLECTION of archeological material from Arica, Chile, recently presented to the Museum by Mr. Harmon W. Hendricks, includes two mummified heads, cups of wood and of earthenware of similar form, together with other objects of wood and pottery, spear foreshafts, and bags and other textiles.

IN *World's Work* for January, 1927, appears an article by Mr. A. Hyatt Verrill on "The Pompeii of Ancient America," which supplements, both in the text and the illustrations, the author's paper on his excavations in the Province of Coclé, Panama, in the present issue of *Indian Notes*.

AN INTERESTING object obtained lately is a pouch formed of the skin of a wildcat's paw, with

## INDIAN NOTES

the claws in place, containing three small skin packets of pulverized medicine, and part of a bird quill with its vexilla. This outfit is the so-called "witch medicine" of the Menomini.

DR. BRUNO OETTEKING, curator of the physical anthropological department, spent the summer in Germany and Switzerland, visiting various institutions and discussing with their staffs a number of problems of physical anthropology.

FROM THE Ulua valley of Honduras was recently obtained a collection of pottery jars and whistles modeled in human and animal forms, together with stamps and molds, and a few pestles and bark-beaters of stone.

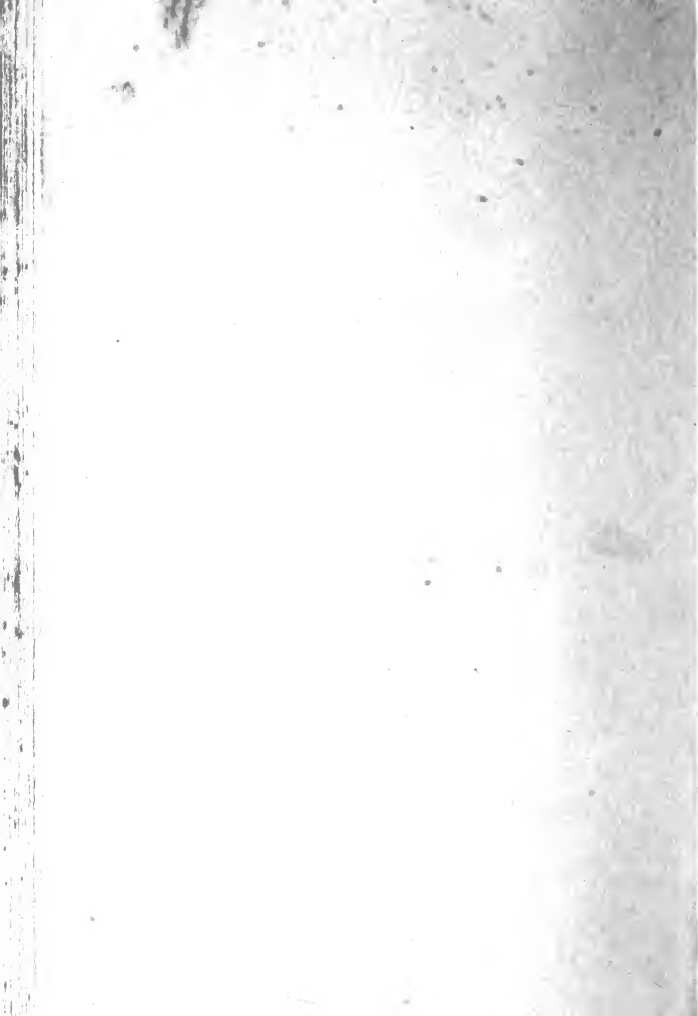
AN ANCIENT deposit of seventeen carved and painted prayer-wands from a cave near Keams cañon in the Hopi country of Arizona has come into the possession of the Museum.

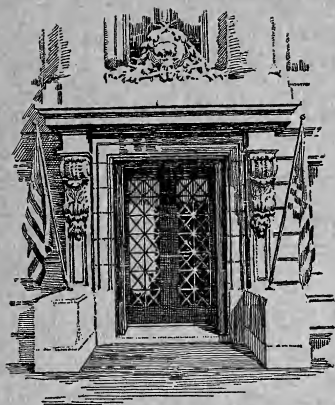
BELONGING to the Chorotegan culture of Lake Nicaragua are seven idols of pumice and one of pottery that have recently been added to the collections of the Museum.

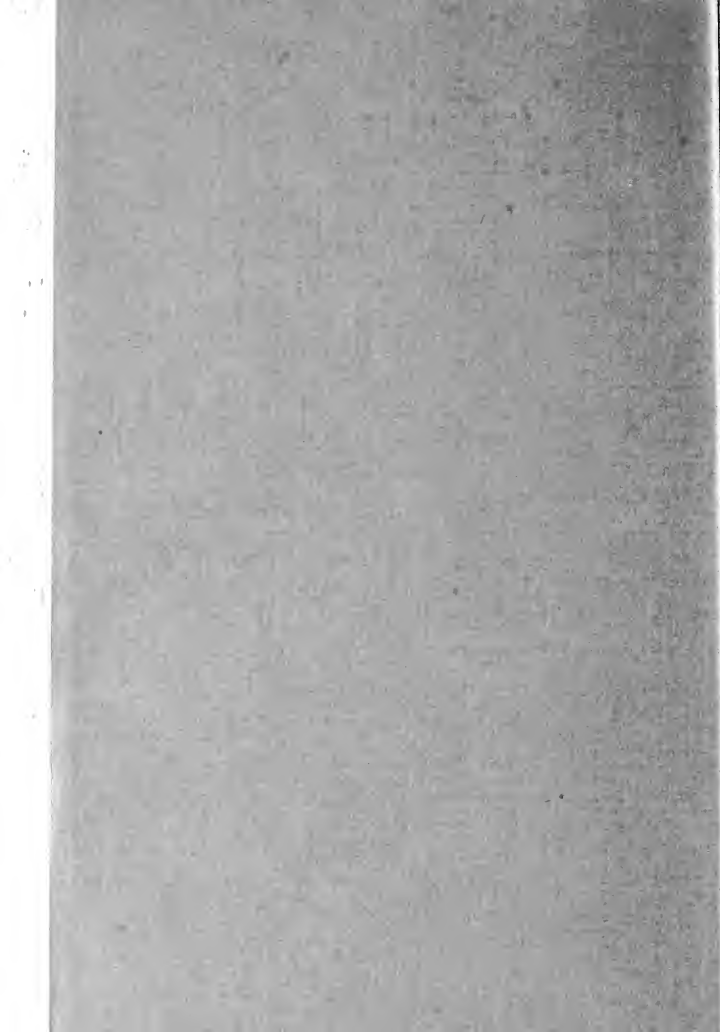
A DUGOUT CANOE from Wisconsin, fourteen feet in length, has been acquired from its Menomini owner whose grandfather made it.











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VOLUME FOUR

NUMBER TWO

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# INDIAN NOTES

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## THE POTTERS OF GUATAJIAGUA, SALVADOR

THE picturesque town of Guatajiagua, situated half a day's ride from San Miguel in eastern Salvador, is noted for the excellence of its pottery. The Indian inhabitants for the greater part are of pure blood, but they have abandoned their native tongue and speak the Spanish language. There is reason to believe that formerly they used the Matagalpan dialect still spoken in Cacaopera and Lislique, although they may have employed the Lenca language like the majority of the inhabitants of eastern Salvador.

Clay for pottery-making is found in three localities near the town. It is mined by women with the aid of an iron-shod stick, broken into small lumps, and carried to the town in broad baskets balanced on the head. There it is dumped into

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large vessels outside the house, water is added and it is left to soak. Meanwhile the jar is carefully covered to keep the pigs from drinking the water.

When the clay is soft, sand and more water are added, and the mixture is kneaded until it is of exactly the right consistency. This is a simple but most important step, and is done with the most scrupulous care, for the soundness of the finished product depends on the proportions of the mixture. During the process and while the vessels are in course of manufacture any chance visitor samples a pinch of clay between the thumb and fingers with all the *savoir faire* and aplomb of a connoisseur sipping vintage wine. To the writer the clay seemed more sticky than is usual in pottery-making, for it adhered firmly to the fingers unless they were dripping with water. When the clay has reached this desired state it is rolled into cylinders about eight inches high and six inches in diameter. These, covered with wet cloths, are kept in the house until needed.

Although the older women may collect the clay, may criticize the making, and aid in the polishing, most of the actual fabrication is done by unmarried girls. The reason for this is that the work is performed on the ground and the potter must stand with her heels together and her knees straight most of the time (fig. 37, *b*). It is not



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an easy position to assume, let alone maintain for long; and the older members of the household are not supple enough for the task.

Before commencing pottery-making a small area outside the house is swept clean and several leaves are placed on the ground to serve as a base for the clay. The potter plunges her fist into a



FIG. 35.—Pottery-making, Guatajiagua, Salvador

clay cylinder, sets it on the leaves, and rapidly works it into a rough ring (fig. 35, *a*). This ring is soon squeezed up to form a crude vessel with a flat base and vertical sides about an inch in thickness (fig. 35, *b*).

The potter then starts to shuffle at an even gait around the vessel. The toes are almost in contact with the clay, but never actually touch it,

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except in the case of the most skilful girls who can walk around the soft clay walls with their toes touching so lightly as not to mar the vessel (fig. 37, *b*). Meanwhile the hands, one inside and the



FIG. 36.—Pottery-making, Guatajiagua, Salvador

other outside, are worked diagonally upward to curve and thin the walls (fig. 36, *a*). In an incredibly short space of time a symmetrical dome of clay with an open top is formed, which is to become the upper half of the completed vessel. This done, the clay is drenched with water, the operator resumes her circular march, and the dome is smoothed by passing a piece of corncob over the surface. The resultant form appears in fig. 36, *a*.

Next the rim is fashioned. This sometimes is

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done by making a crease in the walls, but more often it is built up by adding coils. The difficulty of this stage in the manufacture depends on the size of the opening to be rimmed, as may be seen in fig. 37, *a*, *b*. Again the vessel is drenched with water and carefully smoothed.

When the working-place was selected, it was located in the shade but near the edge of the shadow of the house. So artfully was it chosen that a few minutes after the vessel was half completed, as we



FIG. 37.—Pottery-making, Guatajiagua, Salvador

have described, it was covered by the direct and powerful rays of the tropical sun. The clay dries rapidly. Soon the half-completed vessel is solid enough to lift, and it is picked up, carried again

into the shade (fig. 38, *a*), inverted, and set down with the rim on the ground.

This operation brings the base uppermost, and the leaves on which the original clay cylinder was set are stripped away. The clay thus revealed is



FIG. 38.—Pottery-making, Guatajiagua, Salvador

still soft and plastic, for the half-walls of the pot have sheltered it from the sun.

The soft clay of the base is now pressed out to form a rough cornice on the walls of the inverted vessel (fig. 38, *b*), the potter resumes her walk around the vessel, and the rounded bottom is

created by diagonal stroking with the hands. Soon a stage is reached when the opening is so reduced that it is scarcely possible to insert the hand. This is the last chance to support the interior of the vessel, so it is carefully smoothed with much water and a corncob. Then the hole is reduced in size until only a single finger can be inserted.

Closing this opening is a critical and delicate task. The potter takes fresh clay, adds water, and kneads it to exactly the proper consistency. Then the finger is inserted in the hole and a coil of very soft clay is laid around it. The finger is gently withdrawn; the clay, being just wet enough to flow when unsupported, sinks, as it were, miraculously into place. If the amount and cohesive power of the clay have been correctly estimated, the bottom of the vessel is perfect and flawless.

Final smoothing and polishing with much water and a corncob are now given. This is delicate work, for the rounded bottom of the jar is so unstable as to quiver like jelly at the slightest touch. A hair's-weight too much pressure will cause complete collapse.

The next day handles are inserted. When everything is dry the whole vessel is polished with a stone, and if by chance a trace of the final opening

in the base remains it is carefully scraped smooth. Firing is accomplished in domed adobe ovens.

The resultant vessels are of three principal kinds. One is a deep, open-mouth bowl used primarily for cooking (fig. 38). A second is a globular jar of the kind used all over Latin America for storing water (fig. 37, *a*).<sup>1</sup> The third is a slightly curved griddle (fig. 39) which serves for cooking tortillas. An average worker completes four vessels daily; an exceptional potter turns out as many as eight. The local price of the bowls is six and a quarter cents, and of the jars twelve and a half cents in United States currency. The Indians of Guatajiagua are not rich.

The pottery-making process which we have described appears to be purely aboriginal, and so far as the writer knows, is practised only in Guatajiagua. In other parts of Salvador much pottery is manufactured both by hand and on a wheel. The hand process commonly employed is to model the base of the vessel over an inverted completed jar, partially dry it, and then to build up the walls by the widespread coiling technique.

The Guatajiagua method, however, is more rapid and results in stronger vessels, but it calls for unsurpassed mastery of materials and great

<sup>1</sup> See also *Indian Notes*, vol. II, no. I, fig. 8, *a*.

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manual dexterity. The skill of the potter also lies in the ability to bend so that the hands touch the ground and then to walk in a small perfect circle, for the shape of the vessel is contingent on



FIG. 39.—Pottery griddle, Guatajiagua, Salvador. Diameter 20 inches. (13/1165)

the course of the feet. Furthermore, the hands must work in perfect unison and with great delicacy of touch, though the body be held in an awkward position. Indeed, the hands move

with such rapidity that the eye can scarcely follow them, and with such grace as to transform a stolid chunky Indian girl into the very essence of rhythmic motion. Finally, the potter must be a keen judge of the viscosity of clay, for part of her technique is so delicate that not the human hand but gravity must complete the task.

S. K. LOTHROP

### NOSE-ORNAMENTS OF GOLD

A WIDESPREAD custom of wearing an ornament of some particular form and material attached to the nose has been practised in many parts of the world. Certain Hindu ladies, for instance, wear a small stud or button piercing a lobe of the nose, and in various lands the common custom is followed of wearing a ring or a rod of metal or of other suitable material through the nasal septum. Included in the collection of gold objects in this Museum are a number which doubtless were designed for use as nose-ornaments. For convenience of description these may be classified as of three general forms—the bar, the ring, and the discoid.

The bar was worn horizontally through the septum and sometimes extended several inches on each side of the nose. Illustrations in Richard-



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son's account of his journeys in the Far North<sup>1</sup> show both men and women wearing the bar type of nose-ornaments which probably were made of dentalia; that is, two of the shells were joined at their larger extremities with a piece of wood.

The use of nose-ornaments by the natives of North America is not believed to have been recorded east of the Rocky Mountain region, but the custom prevailed more or less extensively in the coastal area of southern Alaska, British Columbia, and southward to Mexico, in which last-named country it was widely distributed and has been illustrated profusely in picture-writings and stone-carvings. From Middle America the fashion continued into the South American continent, where it is still in vogue among many of the tribes which have resisted the influence of Caucasians. Such articles of adornment were made not only of gold and other precious metals, but of bone, ivory, wood, shell, stone, and feathers, as well. Indeed any suitable and accessible material was employed for the purpose as occasion demanded. Sometimes the ornaments were elaborately fashioned and gaily colored; at other times a mere piece of stick or a bird-quill seemed to suffice.

Two very ornate examples made of gold are il-

<sup>1</sup> Sir John Richardson, *Arctic Searching Expedition*, vol. 1, pls. III, IV, London, 1851.

## INDIAN NOTES

lustrated in fig. 40, both found near the banks of the Rio Sinu in Colombia, and both excellent specimens of the ancient metal-worker's art. In this illustration *a* represents a composite type: a ring is attached to the center of a bar and is pro-

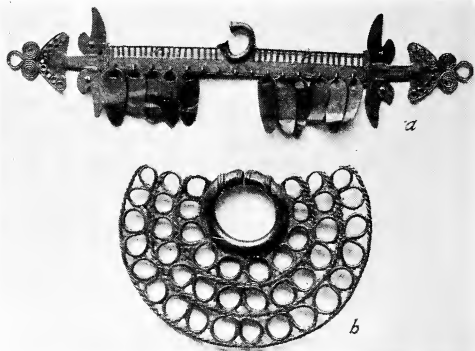


FIG. 40.—Ancient nose-ornaments from Colombia. *a*, 9 inches long (11/5304); *b*, diameter 5 inches (11/5303)

vided with a wide opening so that it might be easily passed through a perforation in the septum. This specimen is of the seemingly unwieldy length of nine inches and contains 1095 grains of gold.

Fig. 40, *b*, illustrates a discoidal nose-ornament

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which likewise is provided with a ring, the ends of which are brought almost together, although they could be easily spread apart by a sidewise movement to permit the septum to pass between the ends, which, when released, would come together again in the perforation. This ring is a

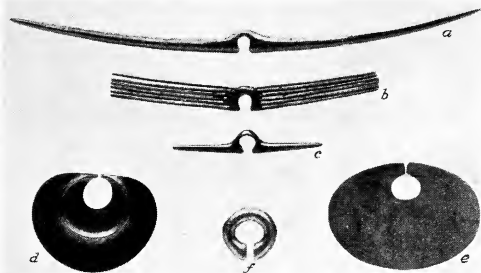


FIG. 41.—Ancient nose-ornaments from Colombia. *a*, 8.75 inches long (5/3948); *b*, 5 inches long (5/3947); *c*, 2.75 inches long (5/1974); *d*, diameter 2.25 inches (1/8518); *e*, diameter 2.75 inches (1/6854); *f*, diameter 1 inch (1/6861)

hollow casting of thin gold, which permits it to yield to side pressure, whereas a solid one would be rigid. The remainder of the ornament, five inches in maximum diameter, is made of twisted and untwisted wires fused together. The specimen consists of 1765 grains of gold.

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Fig. 41 illustrates three ornaments of the bar type (*a-c*), two of discoidal form (*d, e*), and a ring (*f*). The largest bar is eight and three-quarter inches long and weighs 1138 grains; the second is five inches in length and has a weight of 410 grains.

The weight given for several of these specimens is not for the purpose of establishing the value of



FIG. 42.—God of the Chase (*a*) and God of Flowing Water (*b*).  
(After Danzel)

the gold of which they are composed, but rather to draw attention to the discomfort that must have attended the wearing of ornaments of this character.

Illustrations showing the use of nose-ornaments of various forms are numerous in Mexican picture-writings and sculptures, and it is likewise often displayed in ancient pottery from Colombia,

## INDIAN NOTES

Ecuador, and Peru. Fig. 42, reproduced from Danzel's work,<sup>2</sup> illustrates the God of the Chase with a plain bar in his nose, and the God of Flowing Water with an elaborate and massive nose-piece, evidently intended to represent a double-headed serpent. Such large ornate pieces were no doubt designed for use only on ceremonial occasions.

The elliptical objects illustrated in fig. 41, *d*, *e*, measure respectively two and a quarter and two and three-quarters inches in maximum diameter. The gold is thin, so that the points at the openings could be spread apart laterally



FIG. 43.—San Blas women of Panama wearing nose-ornaments

<sup>2</sup> Theodor Wilhelm Danzel, *Mexiko*, I, pls. 21, 41, Hagen und Darmstadt, 1922.

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and thus be easily passed through a perforation in the septum.

The ring shown in *f* of fig. 41 is of platinum and weighs 360 grains. It was worn suspended from

the septum, with the opening downward. Fig. 43 illustrates some San Blas women of Panama wearing rings of this character. Although the custom among these people is gradually dying out, it is still possible to purchase such nose-rings from local traders.



FIG. 44.—A "Pierced-nose" Indian wearing a dentalium nose-ornament.\*

A nose-ornament of dentalium (fig. 44) is illustrated by Curtis as worn by the Nez Percés in the time of Lewis

and Clark, and indeed, according to Ross,<sup>3</sup> as late as the middle of the last century.

WILLIAM C. ORCHARD

<sup>3</sup> Alexander Ross, *Fur Hunters*, vol. 1, p. 185, London, 1855.

\* From Curtis, *Indian Days of Long Ago*, copyright 1914 by World Book Co., publishers, Yonkers-on-Hudson, N. Y.

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### ORIGIN OF THE ARIKARA SILVERBERRY DRINK

ONCE on a time there was famine among the Arikara. The people were sorely in want of food and of other comforts of life. Drought and frosts had destroyed their crops, so that their fields supplied but a very scant harvest. Because of the drought the animals which the Arikara ordinarily used for meat had gone far away. The late spring frosts had killed the blossoms of the wild fruit trees so that now when it was time for fruit there was none. And the drought had so diminished the growth of the wild vegetation, as well as of their cultivated crops, that the people were able to obtain but meager quantities of edible seeds, roots, and tubers of wild plants. The little children often cried from hunger. The people were in pitiful condition. The men were making every endeavor, and every day they made painful and toilsome journeys in search of sustenance for their people.

One day a party of men were out on such an expedition searching for anything which would furnish some comfort for their people. These men were weary, hungry, thirsty, and miserable. Upon a hill from which they could see far around them over the country they sat down upon the

ground, and while here resting they heard a voice calling to them, saying, "You men upon the hill, come you down here!" The men looked at one another in doubt and anxiety, and with some fear because of this strange voice. Finally one of the men dared to go down in response to the call. He went to the place on the north slope of the hill whence the voice seemed to come, and there found himself standing in the midst of a scattered thicket of bushes with silver-gray leaves. "It was a clump of the bushes which our people call *nátara-kapácis*, but which white people call silver-berries," they say. Now, as the man stood amid the bushes he heard the voice again saying to him: "I know your troubles and sorrows. I know the pitiful condition of your people. I have been wishing for you to come, so that I might do something for you. I have not much to offer, but what I have I shall be glad to give you for your comfort and for the comfort of your suffering people. Take some of my leaves and steep them in hot water. You will find they make a comforting hot drink."

The man took of the leaves as he was directed, and went back to his companions and told them what the voice had said. They steeped the leaves as they had been told, and found they made a pleasant drink. They were cheered and en-



## INDIAN NOTES

couraged by the friendliness shown them by the silverberry bushes.

When the men came home to their people they brought with them some of the leaves of the silverberry and told the people of the divine gift and showed them how to use them as they had been instructed. The people were thankful for the gift from the bushes, and were cheered and their hearts were strengthened by the kindness and friendliness which the silverberry bushes had thus shown to them. In token of the people's gratitude the priests performed a ceremony of thanksgiving and made smoke-offerings to all the divine powers of the four quarters of the universe, to Mother Earth and to God above.

MELVIN R. GILMORE

### A HAFTED STONE HAMMER FROM NEVADA

AMONG the most interesting and unusual articles left by the ancient miners in the dusty refuse of the salt caves near St. Thomas, Nevada, recently explored by this Museum, are five rude stone hammers still bearing their original wooden handles in a remarkable state of preservation. Their good condition is doubtless due to the dryness of the cave plus the preservative properties of the salt, and not to recent origin, for with them in

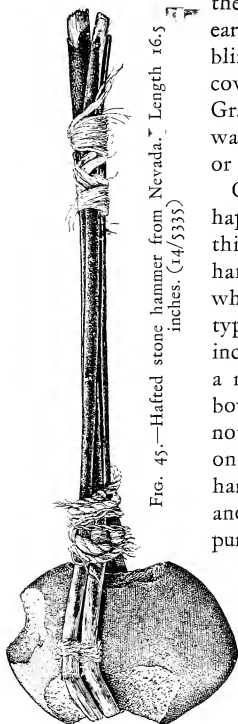


FIG. 45.—Hafted stone hammer from Nevada. Length 16.5 inches. (14/5335)

the same deposit was found early Pueblo pottery resembling closely the ware uncovered by us at Pueblo Grande de Nevada, which was occupied possibly 1500 or 2000 years ago.

Of the five specimens perhaps the most perfect, everything considered, is the hammer shown in fig. 45, which may be considered typical. It measures  $16\frac{1}{2}$  inches over all. The head is a natural, flat, water-worn boulder of quartzite, with notches artificially chipped on the sides to keep the handle from slipping, and another on the top for a purpose that will appear later. Hundreds of similar hammer-heads (from which, however, the handles had disappeared) were discovered in the same cave, and about the ancient sur-

face salt-workings still traceable on the flanks of the neighboring peaks. The striking end of this hammer-head is slightly battered by use, but this fact does not show distinctly in the drawing.

No botanist has yet identified the wood which composes the handle, but natives of the region think it a species of willow sometimes seen in the vicinity. The handle is compound, being made up of two separate sticks, both of them encircling the stone head, but each in a different manner. One of these may be called the main handle (fig. 46, *a*), a willow switch half an inch thick at the butt, and cut to a length of about 20 inches. About eight inches from the small end, this stick has been cut half through, and the cut part split off, leaving the last eight inches of the stick flat on one side. This flattened part was then bent around the hammer-head, through the notches,

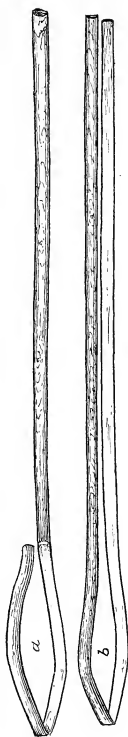


FIG. 46.—Method of cutting the handle for the hafted hammer

brought back, and tied just back of the head with a cord made of yucca-fiber.

This made a complete handle for the hammer, but a handle too flimsy for such hard usage as mining salt; so the second stick was added as a

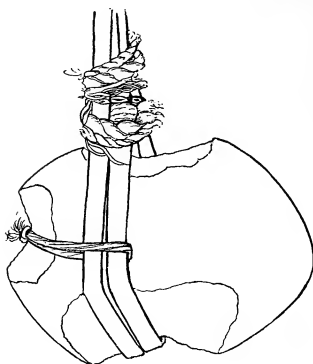


FIG. 47.—How the hammer-head was fastened to its handle

reënforcement (fig. 46, *b*). To make this, another willow switch nearly three feet long was split from end to end into two pieces, one of which, flat side inward, was bent double, with the loop in the middle of it encircling the hammer-head. This re-

ënförment stick was also tied with yucca-cord just back of the head, and again near the other end of the handle, making the complete implement shown in fig. 45.

In looking over the other four hammers from this cave we find that all of them are hafted the

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same way with but slight variation; and that one of them, the handle of which has been partly burned off, shows a sort of stirrup of fiber cord running across the notch on the top of the stone—a stirrup evidently intended to prevent the hammer-head from slipping out of the handle while in use. A part of such a stirrup still remains on our specimen pictured here (fig. 45), and the use of the notch is now explained. With its stirrup in place our hammer-head must have looked like the line drawing (fig. 47).

Stone hammers and axes with compound wooden handles have probably been found in other parts of the Southwest from time to time, but, strange to say, few of them seem to have been figured and described. Two good examples of similar hafting are illustrated in pl. 36 of Nordenskiöld's *Cliff Dwellers of the Mesa Verde*, but in this case the implements are grooved axes and not hammers, and the hafting seems to differ in detail from our Salt Cave specimens. That compound haftings for such implements were used at least as far east as Arkansas and Missouri is established by Dr. W. C. Barnard of Seneca, Missouri, who reports the finding of a similar specimen in an Ozark rock-shelter.

M. R. HARRINGTON

## INDIAN NOTES

### OBJECTS FROM THE CANADIAN NORTHWEST

THE INDIANS of the Canadian Northwest were among the first of those on the North American continent to come in contact with white traders, consequently they were also among the first to lose much of their own material culture by adopting the more practical objects of the white man. For this reason specimens illustrating the ethnology of many of the tribes of this region have become rare, and the Museum is therefore fortunate in its recent acquirement of a collection in which several tribes of the far Northwest are represented. This collection was gathered by an official of the Hudson's Bay Company about sixty years ago, while on his travels to outlying trading posts in northern Manitoba, northern Alberta, Saskatchewan, and Northwest Territory.

Among the rarest specimens in this gathering are some rather extraordinary pieces from the Nahane, an Athapascan tribe which at one time inhabited that part of British Columbia and Yukon Territory between the Coast range and the Rocky mountains, and from the northern border of the Sekani northward to the Loucheux country. Now, however, they consist of a few wandering bands which occupy the country northward from

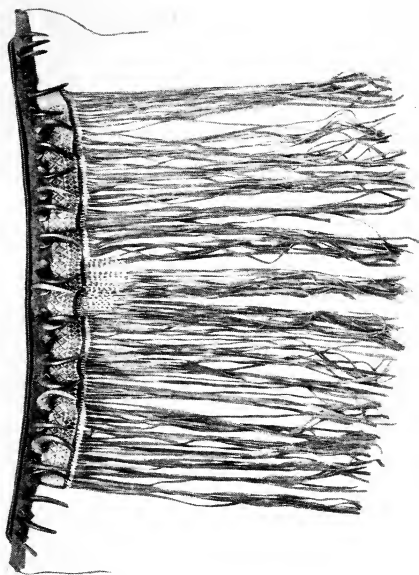


FIG. 48.—Girdle of moose-skin of the Nahane, decorated with porcupine-quills and bear-claws.  
(15/1696)

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Liard river. The material culture of the Nahane has been influenced more or less by the Tlingit,



FIG. 49.—Moose-skin coat of the Nahane, decorated with beads and porcupine-quills. (15/1694)



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owing to the association of the latter with the Tahltan, a division of the Nahane, who occupied the upper reaches of the Stikine river and were in direct contact with the Tlingit.

The Nahane are noted for their skill in the use of porcupine-quillwork on garments, etc., a beautiful example of which is shown on the band



FIG. 50.—Polished stone smoking pipes of the Dogrib Indians.  
Length,  $1\frac{1}{2}$  and  $2\frac{3}{8}$  inches. (15/1681, 1682)

of the moose-skin girdle represented in fig. 48. This girdle, together with several other examples of quill- and bead-work, including a rare type of moose-skin coat (fig. 49), are among the outstanding objects from the Nahane.

Two highly polished smoking pipes of stone (fig. 50) from the Dog-ribs (Thlingchadinne), are included in the collection and are especially



FIG. 51.—Black cloth bag of the eastern Bush Cree, with beaded decoration. (15/1693)

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interesting as the art of pipe-making seems to have been lost by those sub-Arctic people, who occupy the country about the northeastern shore of Great Slave lake. There are also three excellent examples of beaded bags, of which one is illustrated in fig. 51, together with other fine pieces from the Eastern Cree (Maskegon), Chipe-wyan, and Prairie Cree.

DONALD A. CADZOW

### SOME TOLOWA SPECIMENS

THROUGH the bounty of Mr. Harmon W. Hendricks, Vice-chairman of its Board of Trustees, the Museum has been enriched by a splendid lot of Tolowa material collected by Miss Grace Nicholson of Pasadena, California. This, together with other California objects of great importance presented from time to time by Mr. Hendricks and others, has made it possible for the Museum to possess what is probably the most comprehensive representation of Californian archeological and ethnological artifacts extant.

The Tolowa are an Athapascan people living in Del Norte county in the extreme northwestern corner of the state. Except in its minor features their culture closely resembles that of the Yurok, Karok, and Hupa, their immediate southern and

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eastern neighbors. Taken as a whole, the material culture of this northern area is by far the richest of that of any of the tribes of California, except perhaps certain phases of the culture of the ancient inhabitants of the Channel islands and the adjacent mainland. Great care was expended by the northerners in elaborating and beautifying their ceremonial regalia, while even their most utilitarian objects were fashioned and ornamented to a higher degree than among most primitive peoples. In fact, the tribes mentioned appear to have been almost obsessed by a desire to collect and hoard objects rare in their small world, and to display this wealth before their neighbors when certain periodical ceremonies were performed. Such things as dentalium shells, obtained by barter from the north, woodpecker-scalps, huge blades of black and red ("mahogany") obsidian, and the skins of albino deer, were among the coveted riches of these people. Even today, with the white man's currency the purchasing power of the country, the modern descendants of these northern Indians cling to the heirlooms of the past as symbols of social caste and pecuniary prestige in the communities in which they dwell.

In the days before white men arrived such skirts as are illustrated in figs. 52-53 were worn

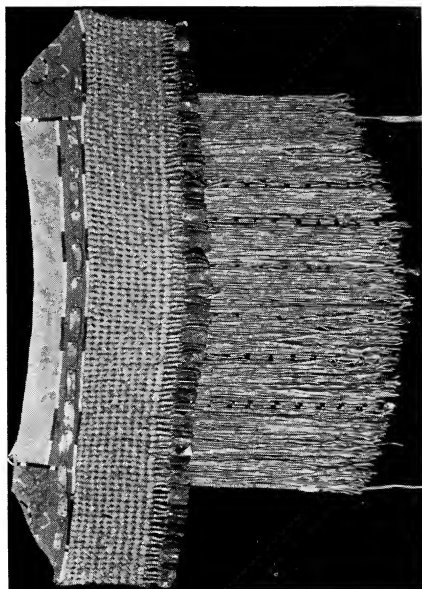


FIG. 52.—Tolowa back-dress of deerskin ornamented with haliotis pendants, cockle-shells, and glass-beaded fringe. (15/1703A)

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only by the wealthiest women of the tribe, generally during ceremonial performances. At present they are donned by young girls when participating in the Jumping dance, a diversion very popular among the Tolowa and their neighbors.

The costume shown is the most elaborate of two such outfits obtained. It consists of two separate pieces—a large, wide, rear-skirt, and a narrower and longer front-skirt or apron. The former garment is wrapped about the hips in such manner as to tie in front, yet so fashioned as to leave a front opening which is filled by the narrow apron. Formerly only a few strands of shell beads were worn above the waist.

The back-dress (fig. 52) is quite handsome. When spread it is fifty inches in width and thirty-five inches in length from the top of the deerskin band encircling the waist to the tips of the long fringes of similar skin forming the nether part of the garment. This skirt is made of deerskin, with red cloth as a trimming on the upper portion. Most of the ornaments displayed consist of small cockle-shells, approximating a thousand in number, each pierced and securely fastened with cord to the deerskin backing. Haliotis-shell, cut into rounded oblong figures, is also used profusely as jinglers which hang pendent from thongs wrapped with shining white strands of beargrass.

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FIG. 53.—Tolowa front apron of beads, shells, and juniper-seeds, worn with back-dress. (15/1703B)

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Other pendant-like pieces of haliotis are sewn across the upper panel of red cloth, which is decorated also with narrow bands of blue and white glass beads.

The front apron (fig. 53) is made somewhat differently. As in the larger garment, its top part is a band of deerskin to which are attached two long skin thongs or ties. The middle or main portion of the apron consists of long strands of juniper-seeds held together with cross-strands of cotton cord, the strands terminating with red and blue glass beads. The lower part of the skirt is a foundation of white cloth on which are arranged, in neat geometric patterns, white cockle-shells and blue glass beads, while haliotis-shell jinglers and red glass beads furnish the trimming of the border. In some cases such costumes are ornamented with pendants of obsidian flakes that produce a tinkling sound when the wearer dances.

Owing to the fact that haliotis-shells are quite common along the Pacific coast, the tribesmen did not value these iridescent univalves as greatly as they did the less ornate white clam-shells and the much sought dentalia or tusk-shells. Consequently the haliotis was used more in decoration than as a medium of exchange. It was the dentalium-shells obtained from the tribes of Van-



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couver island and the Washington and Oregon coast that attained the greatest value and circulated as currency among the Indians of northern California.

Dentalium-shells had fixed values according to length. They were carefully measured, and either strung, so many to a string, or kept singly. Practically anything—houses, canoes, wives, and slaves—was purchasable with this odd money. Blood feuds were settled by payment of so many strings of dentalia, and a man's standing in the community was rated by his wealth in that commodity.

Dentalia currency was termed *otlwetsik* by the Yurok, a term meaning "human beings their dentalium." In time white men transformed the word into "allicocheek," by which name it is now popularly known throughout the territory in which dentalia are used. The Museum has a number of strands of these, one of which, a handsome thirteen-shell string, is depicted in part in fig. 54. Being the most northerly of the coast tribes, the Tolowa were probably the first California Indians to receive dentalia by exchange from the people who procured them from the deep off-shore waters. All the shells bear evidence, in the manner of their ornamentation, of the high regard in which they were held by their



FIG. 54.—Ornamented dentalium-shells of the Tolowa. Slightly reduced. (15/1732)

primitive owners. Practically all the shells used as currency were decorated with incised lines and slender strips of snake-skin spiraled throughout their length. In some cases they were further ornamented with scalps of woodpeckers, but this did not enhance their value. Shells of lesser length or with broken tips were termed "women's dentalia" and served as necklace beads. Such a necklace with alternating blue and red glass beads is shown in fig. 55. Necklaces of many strands of "women's dentalia" are commonly worn in the Jumping dance.

Being excellent craftsmen, the Tolowa fashioned objects of wood, antler, bone, and shell

INDIAN NOTES

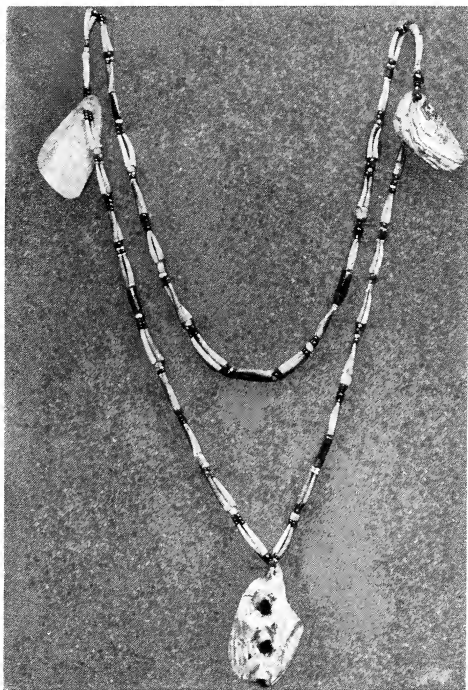


FIG. 55.—Tolowa necklace of dentalium-shells, glass beads, and haliotis-shell pendants. (15/1718)

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equally well. In former times dentalia currency was carried in curious purses made of lengths of

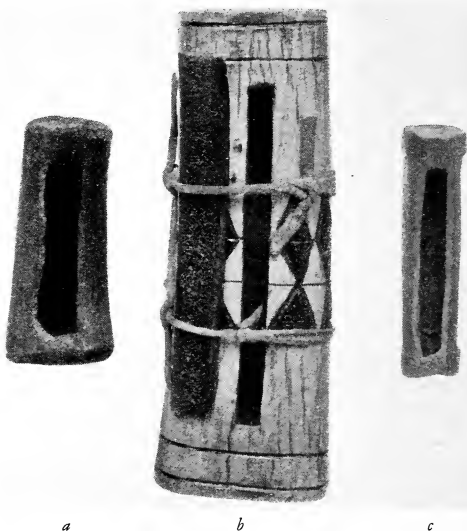


FIG. 56.—*a*, *c*, Small deer-horn purses (*c*, 2.75 inches); *b*, Elk-horn purse with incised and painted decoration (5.5 inches). (*a* 15/1724; *b*, 15/1723; *c*, 15/1725)

elk-horn varying from four to seven inches, the spongy part of the horn being cut out. Geometric

## INDIAN NOTES

patterns were incised on the smooth exterior of the purse, and in the natural inner curve of the antler a narrow slit was cut to serve as its opening.

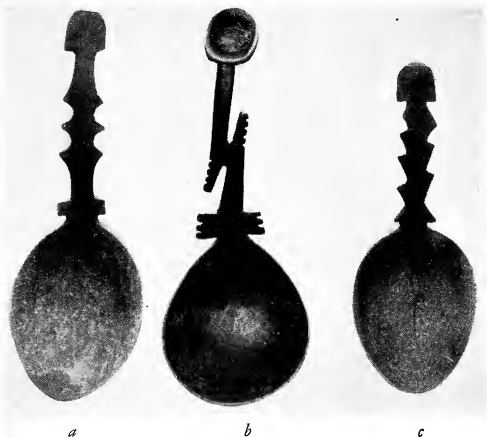


FIG. 57.—*a*, *c*, Wooden spoons (length 6.5 and 5.5 inches);  
*b*, Elk-horn spoon (length 6.75 inches). (*a*, 15/1726; *b*,  
15/1728; *c*, 15/1727)

To prevent the precious shells from falling out, a thin slab of antler was fitted over the slot and held in place by deerskin thongs. Strings of money were folded as they were placed in the receptacle.



FIG. 58.—Wooden  
paddle. Length  
18.75 inches.  
(15/1713)

Such a purse is shown in fig. 56, together with two smaller purses of deer-horn. Elk-horn was used also in the manufacture of neatly carved spoons (fig. 57, *b*), but these have been superseded by those carved from wood (fig. 57, *a*, *c*). Even the wooden paddles used in stirring corn mush in the cooking baskets are carved, as shown in fig. 58.

The smoking pipes used by the Tolowa are made of wood, rubbed down with sandstone and polished with the horsetail or scouring rush. Inserted in the ends of the pipes are bowls of dark-colored steatite. Men who took pride in the possession of well-made things generally decorated their pipes with haliotis-shell inlay, as shown in fig. 59, *b*. These implements were carried in pouches (fig. 59, *a*, *c*), bowl-end downward, and when a man wished to fill his tube he pressed its muzzle into the tobacco until the opening was crammed with the native weed.

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FIG. 59.—Tolowa pipe-cases of deerskin (*a*, *c*) and wooden tubular pipe inlaid with haliotis-shell (*b*). Length of *b*, 4 inches. (*a*, *b*, 15/1722; *c*, 15/1721)

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Another item of interest in the collection is a "strip" headband made of deerskin on which has been glued a downy covering of woodpecker-scalps and decorated along the border with white elk-skin and inserts of bluebird- or bluejay-feathers. Such headgear is worn in the Jumping dance by men and boys.

Other items, such as pestles, baskets, seed necklaces, a fish-net, a wooden trinket box, fire-drill, guessing game, granite mauls for driving elk-horn wedges in splitting logs, and several skins used in ceremonial dances, are included in the collection. Taken as a whole the objects serve admirably to illustrate the material culture of the Tolowa, and, in conjunction with other Museum specimens from the same tribe, offer the student an excellent opportunity to study at first-hand the most characteristic ethnologic specimens of northern California.

ARTHUR WOODWARD

### CHEYENNE STONE BUFFALO-HORN

AN OBJECT of great mystery and of sacred significance to the Cheyenne has come into the possession of the Museum through the kind gift of Dr. George Bird Grinnell, who has devoted so many years to the study of those Indians, much of



his great fund of information being recorded in *Fighting Cheyennes* (1915), *Cheyenne Indians* (two volumes, 1923), and *By Cheyenne Campfires* (1926). The object referred to is a much-worn specimen of horn coral (*Streptelasma rusticum*), a fossil found in the late Ordovician shales of Ohio, Michigan, and Manitoba. But to the Cheyenne it is something quite different—it is the “stone buffalo-horn, and the wrinkles on it show that it came from a very old bull.” A glance at the object (fig. 60) would convince one of the reason why the Cheyenne should have so regarded it, and, considering their dependence on the buffalo in the old days, why it should have possessed mysterious power and become so highly sacred.



FIG. 60.—The Cheyenne stone buffalo-horn.

Height  $3\frac{5}{8}$  inches.

(15/2181)

In his work last cited Dr. Grinnell relates the story of the origin of the stone buffalo-horn and of its use by Listening to the Ground in calling the buffalo. This was many years ago, when the

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Cheyenne were living in the Black Hills. A person had come to Listening to the Ground and had put down the stone horn before him. He afterward said that this was some spirit who had taken pity on him and his family. The spirit told him to take the horn back to his people, and showed him what to do to call the buffalo, and taught him what songs he should sing.

Listening to the Ground's daughter died in 1875 at the age of about seventy. The first ceremony of calling the buffalo by Listening to the Ground was performed by placing the horn on the ground with the point to the east and telling everybody to watch. He said he would sing three times and that when he sang the third time all should look at his little daughter to see if her right ear moved as the buffalo calves' ears moved. They watched as directed, and saw the little girl's right ear move. Then he sang again, and her left ear moved. Then Listening to the Ground said, "Watch the stone," and the fourth time he sang, as the girl moved her left ear, the stone horn rolled over very slowly toward the north with its point still to the east. The next morning a watcher was selected to go to the top of a nearby hill and while ascending he saw a herd of buffalo coming toward camp. A hunt followed and the tongues were brought to Listening to the Ground,

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and boiled for a feast. The buffalo were called in a similar way for a second time; but in calling them a third time, while making the ceremony Listening to the Ground told the people that he had made a mistake, and fell back and died before being able to impart his secret.

The stone horn used to be laid with the medicine near the Thunder's nest in the Medicine Lodge. The song, "Buffalo, walk toward this place, and arrive here," is still sung in the lodge. Everybody learned the song without trouble, because Listening to the Ground, when he first established the song, chewed some sweet root and spit it out around him. The song was sung the first time probably about the year 1810; the last time it was sung by Listening to the Ground he was so old that he had to be carried to the Medicine Lodge.

After the original owner died, his son took the stone horn and also his father's name. The son died about 1885, when Fast Wolf, his next of kin, took the horn. Just before his death in 1901, Fast Wolf gave the horn to Wolf Chief. But the object was never used to call the buffalo after the time of Listening to the Ground, and all of its owners have died suddenly. The son of Listening to the Ground and his successors, however, used it for doctoring the sick in the mysterious manner described by Dr. Grinnell.

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### INDIAN BURIALS IN SOUTHERN CALIFORNIA

ABOUT four miles to the eastward of Ramona, San Diego county, California, lies a valley, still known by its Spanish grant name of San Vicente (fig. 61), which was once a favorite haunt of the



FIG. 61.—San Vicente valley in the old Diegueño country,  
California

Diegueño Indians. Here, on a ranch owned by the writer, are an ancient camp-site and cemetery (figs. 62, 63) surrounding a copious spring. The site is known to the Diegueños by the name *Ochghwhee*, referring to an onion-like tuber.

There is a tradition to the effect that one hill near the spring was used by the Indians as a burial

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ground, another for a council or meeting place, and another for community eating and pleasure. According to the legend, the spring itself was at one time a deep pool, around which religious ceremonies were held, but a great flood filled the pool with dirt, leaving only a spring to furnish water for the later Indians.

It is also told that there was a silversmith in this tribe, skilled in making ornaments, and this is supported by latter-day white settlers; but the tradition that the silversmith knew of a silver ledge where he mined his material can not be verified, because the ledge has never been found.

I had long planned to explore this site, and in fact had sunk a few test-holes in the vicinity of the spring, holes which yielded some interesting relics; but it was not until August, 1926, that I attempted any serious work. At this time I undertook some excavations for the Museum of the American Indian, Heye Foundation, after a visit from Mr. M. R. Harrington, a member of its staff.

Setting my men to work on the hill about one hundred yards north of the spring, on August 26 we uncovered a stone crypt, plastered over, at a depth of two and a half feet, which contained the skeleton of a half-grown child. The body had evidently been doubled up, placed in the crypt, and then completely covered with a kind of natural

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cement, a bed of which may still be found about five miles away. Rodents had entered the crypt, eating some of the bones and building nests in the



FIG. 62.—Diegueño camp and burial site

hollows; the remaining bones were rather fragile, many falling to pieces when lifted.

The finding of such an unburned skeleton is unusual in this district, for the local Indians commonly cremated their dead and buried the incinerated bones in pottery urns. These utensils do not seem to have been specially made for this purpose, however, but originally served as cooking-pots and water-jars for domestic use.

Many pieces of quartz and bright-colored stones were scattered over and around the crypt, which was covered with a six-inch layer of ashes. Five

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broken metates were placed about it to mark or hold the place, and a large arrow-shape stone of gray granite on the surface (fig. 63). About the crypt had been also buried a ten-foot circle of mortuary urns, probably ten in all, of which only two were perfect and two more restorable, the rest having been so broken and scattered by burrowing animals as to be beyond repair.

The first of the perfect urns, of brownish ware, originally a cooking-pot blackened by long use (fig. 64), rested on the granite bed-rock at a depth of three and a half feet, in the bottom of a hole, the outlines of which were still visible, scooped out in the soil to receive it. There were many



FIG. 63.—Ancient Diegueño cemetery marked by an arrow-shape stone

broken grinding stones and other stone implements about it, but the cover of the vessel was missing. It still contained, however, small pieces of burnt

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bones and ashes, evidently the remains of a cremated body. This pot is about nine inches high and eight inches in diameter.

The second vessel, also a smoke-blackened cooking-pot, eight and a quarter inches high and



FIG. 64.—Ancient Diegueño cooking-pot.  
Height 9 inches. (15/786)

six and a half inches in diameter, lay fully two feet deeper, resting on the granite bed-rock five and a half feet underground. This had a stone cover cemented on and contained incinerated human remains.

Of the fragmentary vessels, the most complete lay two and a half feet from the surface, under a broken metate, with small broken stones around it and another small flat stone for a cover. This also had been a cooking-pot, and from its smaller size I imagine that it may have held the ashes of a child.



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As for the broken metates, these represent the simple type used by the Indians of this vicinity to grind their seeds and acorns for food—merely a flat slab of stone, more or less rough, with an oval depression in one face. Of metates and the grinding stones used with them perhaps a hundred have been found at this site. When a death occurred the metate was broken and its fragments buried with the ashes of the dead.

Apart from the circle of urns, two other exam-

ples were found, both large and perfect, and both true water-jars of reddish-yellow ware. These had been laid on the granite bed-rock three feet deep, at an angle, with their mouths turned east by

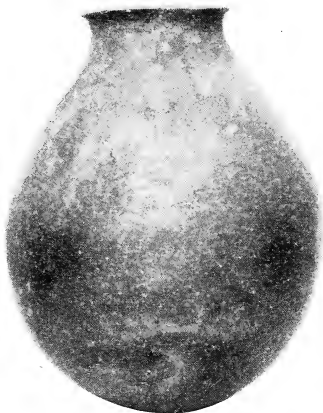


FIG. 65.—Ancient Diegueño water-jar.  
Height 13.75 inches. (15/784)

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south, and were cemented over with the lime-like natural cement. Numerous stones and animal bones surrounded them, as well as a large metate broken to pieces; and in the vicinity were many heaps of ashes from fires built to cremate the dead.

The larger of these ollas (fig. 65), thirteen and three-quarters inches high and eleven inches in diameter, had a covering of what seemed to be



FIG. 66.—Ancient Diegueño pipe. Length 4.25 inches.  
(15/796)

native cloth, occupying a space of six by ten inches, which on exposure became dust. Lying on the ashes in the top of the urn was a native earthenware pipe (fig. 66), provided with a wooden stem which went to pieces when lifted. The pipe was a slightly bent tube four and a quarter inches long, terminating in a flaring bowl about an inch in diameter. At the bend was a fin-like projection

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by which it could be held by the smoker. It had been wrapped in some sort of cloth, burned beyond recovery. Mr. Harrington informs me, however, that when the burnt bones and ashes were removed from this urn at the Museum a number of fragments of partly burned native netting were found among them, hence it is possible that what I regarded as cloth may have been netting. He says that the finest of this netting shows approximately a quarter-inch mesh, and probably formed part of a netted bag; and that there were also pieces of a coarser net with a mesh measuring one and three-eighths inches, made very much like a modern fish-net, yet clearly of Indian origin.

The second large olla was provided with a potsherd for a cover. If an additional covering of cloth or netting had ever existed, it had been destroyed by the rodents which evidently entered the urn. This vessel was thirteen and a half inches high and nine and a half inches in diameter, and contained ashes and burned fragments of human bones.

Although we found no articles of white man's manufacture, all these burials and specimens may be regarded as pertaining entirely to the relatively modern Diegueños whose descendants are still found in this vicinity. In fact one of them was employed as a workman to help uncover the buri-

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FIG. 67.—Perforated stone tablets from San Vicente valley.  
Length of *a*,  $6\frac{1}{16}$  inches. (15/798-801)

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als. However, there is reason to believe that, before their time, the San Vicente valley was visited by a different people who camped at the water-holes but did not linger long. They left very little in the way of artifacts, but those they did leave are different from the ones attributable to the more recent occupants. Among the specimens pertaining to the earlier people are four thin, perforated, stone tablets (fig. 67), uncovered by one of my men while digging a post-hole not far from the spring above mentioned, and presented by me to the Museum of the American Indian, Heye Foundation. All of these differ from the stone tablets commonly found in California, and two in particular resemble closely the ancient "gorgets" of stone from the Mound region of Ohio and Indiana.

J. W. MYKRANTZ

## GOW-SMITH'S EXPLORATIONS IN BRAZIL

AT THE close of the year the Museum received word, through radio communication with the United States Navy, that Mr. Francis Gow-Smith, who had been making ethnological collections in the Xingu river region of Brazil for eight months, successfully finished his task and was on the way to São Paulo. On January 19 a letter

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dated Juruena, Matto Grosso, November 5, was received from Mr. Gow-Smith in which he describes the progress of his work and relates some of his experiences among the native tribes. The report is so interesting that it is here printed almost in full.

"A messenger is leaving Juruena on the thirteenth for Cuyabá, so I am taking this opportunity to let you know that I am among the Nambikuára. Have been working among them at this place for two weeks. They are the most primitive Indians I have so far visited, sleeping on the ground and eating practically raw food. Their wigwams are constructed by making 'lean-to's' from branches of trees, and their villages are built some distance from water. Their sole feather ornament is a macaw feather in the nose; in the upper lip they wear a reed. Arm, leg, and waist bands are made from the fiber of the Burity palm. Men and women are completely nude.

"Food in this region is very scarce, as all supplies are brought from Cuyabá or Cáceres, about three hundred miles distant. Many times transportation breaks down completely and the inhabitants are without food for two or three months, during which interval they are forced to hunt their food in the jungle. Very little is to be

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found, as the Nambikuára keep the country thinned of its game. Some of the people live for days on the tender part of the Burity palm and mandioca. It is difficult to catch fish, as the water in the river is very clear.

"A short time before I arrived, six people, driven by hunger, went to the Nambikuára village to procure honey, mandioca, and game. That night they were all killed with a club while they slept. A searching party found their bodies two weeks later. A few days ago a band of Nambikuára came to the village of Juruena and offered peace, going through a pantomime of the murder. Peace was readily granted, as the Brazilian is deathly afraid of them. In murders the Brazilian is the transgressor, and the Indian retaliates.

"I have been in daily touch with Nambikuára, and they are very friendly with me. Yesterday one wanted me to go with him to his village, but I declined. I have a fair vocabulary of their language. Most of their sounds are guttural and their words end in *su*. Some of them suffer with a scaly skin disease: the Brazilians say it is due to their eating snakes. None of the Nambikuára speak Portuguese, and my conversation is in the sign language.

"It is impossible to reach the Xingu from here. I must return to Cuyabá. Am leaving tomorrow

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for Utiarity, about eighty miles south of Juruena, on the telegraph line. This is the end of the Nambikuára territory and the beginning of the Paresi. The Rio Roosevelt is the northern territorial limit of the Nambikuára.

"At Utiarity I expect to join a Brazilian expedition to study a tribe of practically unknown Indians called Iranche. From there I expect to go first to São Luiz de Cáceres, via Tapirapuan, and then to Cuyabá for the Xingu.

"I am behind schedule, owing to unforeseen difficulties in transportation and unusually dry weather. Until the rains began there was no pasture for the animals. To me this is the most dismal place I have visited. The ground is not fit for cultivation. The chief occupation is rubber-gathering. The country for nearly four hundred miles south is covered with scrubs and is without human habitation. Roosevelt followed this trail to the River of Doubt.

"The insects are terrible, and it is nearly impossible to write. However, so far my health has been good."

DR. GILMORE'S FIELD RESEARCHES IN 1926

DR. MELVIN R. GILMORE left New York the latter part of June to visit the tribes of the Mis-



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souri River region for the purpose of gathering ethnobotanical specimens, together with information from the Indians who have knowledge of these things. A working collection of plants of Indian use, and of the products made from them, are among the greatest needs of the Museum at the present time, and require to be gathered without delay because of the fast-approaching end of all that generation of Indians who alone possess the knowledge of the aboriginal uses of the native plants.

Arriving in Nebraska, Dr. Gilmore assembled his equipment and drove early in July to the Arikara on the Fort Berthold reservation in North Dakota, about eight hundred miles northward. The remainder of the month was spent with the Arikara, and some contact was made with the Mandan. A number of ancient ritualistic ceremonies of the Arikara were witnessed and noted, and photographs taken. Besides the ceremonies pertaining wholly to the old-time life, there are some which have been adapted from ancient ritual and custom to present-day conditions. For example, there is a ceremony, adapting old-time rituals, made for the departure of Arikara children to attend various Government boarding schools.

Dr. Gilmore learned also the Arikara uses of about fifty additional species of plants. An old

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man was engaged to make some cord by the old method from the fiber of *Apocynum cannabinum*, demonstrating all the processes of its manufacture from the raw product to the finished article, on all of which notes were taken and photographs made. Specimens of food products, clay paints used in ceremonial painting of the body, and clays used for powdering the skin as white people use talcum, were obtained from the Arikara. From this tribe also he obtained a number of rare old objects, including a symbolically painted war-shield cover and scalplock pendant, and an old medicine-bag and its accompanying gourd rattle. With the Arikara he witnessed also and took note of the slaying, singeing, washing, butchering, and cooking of a dog for a ceremonial feast, and photographed the process of singeing; he likewise obtained full details of the structure of their old-time tribal temple according to priestly prescription and regulations, including measurements and materials, the processes of finding the lines, curves, and angles for the structure, together with an account of the ceremonies attending the dedication of the temple when finished. A mass of information on the theory and practise of obstetrics in the Arikara tribe was recorded from a woman who is known as their most skilled midwife.

After his vacation Dr. Gilmore went to the

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Omaha in Nebraska for a short time in September, thence to the Rosebud reservation in South Dakota, where reside the Brulé division of the Teton Dakota. Although his first visit to these people, he was able to make a good beginning of acquaintance with them, which would be still more profitable of results if it might be followed by a visit the coming season. As it was, he obtained a considerable increase of information and tangible objects of the Teton Dakota plant uses and products.

After the visit to the Rosebud reservation Dr. Gilmore returned to Nebraska and spent the remaining time of October and part of November with the Omaha and Winnebago. From the latter he procured seeds of a considerable number of species of their old-time agricultural crops, and from the Omaha he gathered native food products, several rare old objects of personal and household use, and four sacred medicine-packs. From the Omaha also he obtained detailed information on the methods of slaughtering, dressing, preserving, and cooking the meat of large mammals, and the processes of dressing and cooking the meat of small mammals, of large and small birds, the cooking of the eggs of wild fowl, the cooking of different species of turtles and of fishes, and also a number of vegetal foods not heretofore recorded.

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### A POMO HEADDRESS

A LITTLE bit of folklore current among the Pomo Indians of California accounts for the origin of a certain type of headdress worn by them and their neighbors. The story is to the effect that in very early times, when people were birds, Karrach, the Redheaded Woodpecker, was greatly concerned when at certain seasons of the year he molted his feathers. At a conference of the bird people it was decided that, to prevent their loss, the molted feathers should be woven into a headband, so Red-headed Woodpecker forthwith proceeded to devise a headband into which the feathers might be incorporated. On its completion, the people were summoned together, when with great ceremony and after a blessing pronounced by the medicine-man the headdress was exhibited to the assembly. Woodpecker had used not only his own bright-red feathers, but also some plumes supplied by his brother-in-law, the California Quail. The headdress was immediately adopted and became an important adjunct to the religious paraphernalia. Woodpecker agreed to instruct the people how to weave such ornaments, so that there should be no further waste of feathers.

After the presentation ceremony was finished, two beautifully feathered birds offered their

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feathers for use in like manner. They were the Green-headed and the Brown-headed Duck. The offer was thoroughly discussed and accepted. This accounts for the use of other than woodpecker-feathers and quail-plumes in making the headdresses.

The significance of the headdress in Pomo ceremony is well-nigh lost. The original idea of a woven band with individual feathers interwoven has apparently given way to a much easier process of manufacture, that of attaching entire crests to a strip of dressed deerskin, which of course has resulted in a great saving of time and perhaps a sacrifice of beauty. William Benson, one of the older Pomo, who still retains a knowledge of the ancient style of making a headdress, was prevailed upon some time ago to make one which we reproduce in fig. 68. Its entire length, including the looped ends, is twenty-five and a half inches, and its width five and a half inches.

A rectangular wooden frame was used to support a two-bar loom on which the object was woven. The warp and weft strings, of equal size, are made of milkweed-fiber. The weave is of the common one-over, one-under variety; the weft strands, however, are drawn tight, so that the warp is exposed and the weft concealed (fig. 69).

The weaving of the headdress was a simple

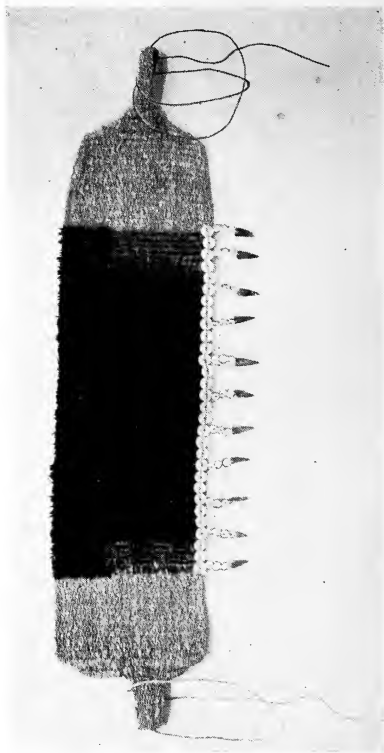


FIG. 68.—Pomo woven headdress of milkweed-fiber, decorated with black, green, and red feathers, and shell beads. Length 25.5 inches. (14/9756)

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operation, while the incorporation of the feathers, although likewise a simple process, must have been extremely tedious. The small crest-feathers of the woodpecker, which were used in this case, average a trifle more than a quarter of an inch long, with almost micro-

scopic quills.

Three or four

of these are

brought to-

gether as a

unit; the quills

are tipped

with a glue

made from

baked soap-

root (*Yucca*

*glauca*) and

laid under the

loops formed

by the warp-

strands as the

weave pro-

gressed. The feathered area is twelve and three-

quarters inches long and covers the width. Small

green feathers from the head of a duck have been

used for a border along the upper edge. Plumes

from the California quail are interspersed among

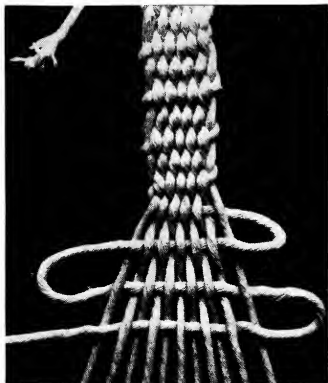


FIG. 69.—Detail of weave of Pomo  
headdress

the red feathers of the woodpecker. The lower edge is further ornamented with discoidal shell beads and small pendants of abalone.

The color combination of this beautiful object can scarcely be described. The milkweed-fiber threads are a soft, light tan; the woodpecker-feathers are scarlet; the duck-feathers are a lustrous metallic green, and the quail-plumes are black. Such a headdress, worn in combination with other gaily-colored regalia, of which brilliant plumage formed an important part, must have presented a striking spectacle indeed.

WILLIAM C. ORCHARD

### OLD IROQUOIS NEEDLES OF BRASS

THE accompanying outlines (fig. 70) represent imitations in thin brass of the bone needles first used by the Iroquois. The first (*a*) is nearly three and a half inches in length and three-eighths of an inch wide at the base, or eye-end. This needle, found on the site of Onondaga, 1720-1750, is broader and longer than the average one of bone.

Fig. *b*, shorter and narrower than *a*, is more like the bone needles, though longer than most of them. This was found by the writer on the Onondaga village-site of 1684-1700. The village was destroyed by fire at the time of Frontenac's invasion in 1696.



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Fig. *c* is narrow and without perforation. Occasionally the base of such examples is folded upon itself to hold the thread. As many of these needles are broken, their fragments are easily overlooked.

Recently I saw a long, narrow, double-pointed needle of brass with two eyes; it was found on a recent site three miles north of Pompey Hill, Onondaga county, and another came from the town of Kanatagowah ("Big village near the council house") in Onondaga valley, where the Onondaga lived from 1720 to 1750. This example has three perforations. "Indian Hill" (1654-1682) has furnished the first examples of these needles.

The late Dr. Beauchamp, who figured four from this place, says: "They are from Indian

Hill in Pompey, and have been reported from no other place. They are about as thick as needles of bone, but rather wider than most of these." Again: "Such needles have been used in netting snow-shoes. These have been placed in the [New

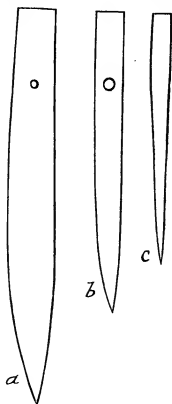


FIG. 70.—Iroquois brass needles. Length of *a*, 3.5 inches

## INDIAN NOTES

York] State Museum. Their age is not far from 250 years, and they are all that the writer has anywhere seen."<sup>1</sup> Subsequently, however, such needles have been reported from several places, and are probably rather widely distributed. It is not improbable that others will be found in Canada, as well as on sites along the Mohawk river. When the Indians obtained iron tools from the whites, they could make such needles out of sheet-brass for themselves, which of course were more serviceable than those of bone and were preferred accordingly. A few of the finest needles are of European make, and seem to have been cast.

WILLIAM G. HINSDALE

### RECENT ACCESSIONS BY GIFT

*From American Geographical Society:*

Thirty-four photographs.

*From Miss Margaret E. Ashley:*

Two pottery discs; thirteen unfinished pottery discs; one hundred and six potsherds; three potsherds with traces of red paint; five fragments of pottery pipe-stem; three fragments of pottery pipe bowl; two handles of pottery vessels; two sharpening stones; five grinding stones; fragment of celt; two arrowpoints; conch-shell dish; two columellas of shell; rectangular shell blank; shell beads; pointed shell-bead blanks; pointed object of unfired clay with hollow in one side; yellow-paint stone; two

---

<sup>1</sup> W. M. Beauchamp, *Metallic Ornaments of the New York Indians*, Bull. 73, New York State Mus., Albany, 1903.

## INDIAN NOTES

red-paint stones; powdered red paint; charred acorns; piece of cut mica; two large jars; fragment of large jar with stamped decoration; fragment of large bowl with incised decoration; large bowl with incised decoration; two large bowls with incised and stamped decoration; jar with rectangular top and four points on rim, underneath each of which is a node; small bowl representing a bird, head missing; fragment of pottery vessel showing flat base, with stamped decoration; two potsherds showing handle. From a Cherokee site on Oconee river, twelve miles southeast of Milledgeville, Baldwin county, Georgia.

*From Dr. William R. Blackie:*

Doll. Arapaho.

*From Mr. Reginald Pelham Bolton:*

Chipped stone knife-blade. Clinch river, Virginia.

*From Messrs. G. O. Bonawit and Howard Smolleck:*

Thirteen chipped flints; twenty-five hammerstones. Flint quarry, Coxsackie, Green county, New York.

*From Mr. Howard P. Bullis:*

Nineteen arrow and scraper points. Maspeth, Queens county, Long Island, New York. Seven lithographs from Sitgreaves, 1853; lithograph from Marcy, 1854.

*From Mr. William L. Calver:*

Arrowpoint. Pamrapo village-site, Greenville, New Jersey.

*From Mr. E. Marsden Chapman:*

One hundred and fifty arrowpoints, scrapers, and chips; ninety-five potsherds; axe; pitted stone; four hammerstones; three hoes; three notched sinkers; eight worked stones; pottery pipe-stem. Pamrapo village-site, Greenville, New Jersey.

*From Mrs. Ethel A. Cleaves:*

Human pottery head. Teotihuacan, Valley of Mexico, Mexico.

*From Mr. M. D. C. Crawford:*

Two Peruvian jars. Collected from the deep cut on the Payta and Piura railroad.

*From Mr. Lyons F. W. Delaney:*

Three baskets; mat. Micmac.

*From Mr. F. S. Dellenbaugh:*

Sketch of picture-writings. Southern Utah.

## INDIAN NOTES

*From Mr. Marion Eppley:*

Three fragments of arrowpoints. Bear Swamp (western edge), Queen's river, Exeter, Washington.

Two arrowpoints. Hartford, Connecticut.

Flat celt. Denton, North Carolina.

Grooved net-sinker. Brenton's cave, Beacon rock, Newport, Rhode Island.

Grooved axe. Paradise rocks, Middletown, Rhode Island.

*From Mr. Charles T. Fririchs:*

Seven arrowpoints; five notched sinkers; pitted stone. Staten Island, New York.

*From Dr. G. B. Grinnell:*

Sacred "stone buffalo-horn." Cheyenne. (See pages 150-153.)

*From Mr. G. H. Harner:*

Two potsherds. Pamrapo village-site, Greenville, New Jersey.

*From Mr. Gordon Harris:*

Circular grinding stone. Burlingham, New York.

*From Mr. W. R. Harris:*

Sandstone mortar; hammerstone. Burlingham, New York.

*From Mrs. Thea Heye:*

Six baskets of various sizes, shapes, and styles of ornamentation. Pomo, California.

Necklace of glass beads and of dentalium beads with incised decoration. Karok, California.

Beaded blanket strip. Nez Percé.

Blanket. Chimayo, New Mexico.

Basket and cover. Makah. Washington.

Basket with red and black decoration. Santa Inéz Mission, California. (See pages 186-188.)

Pottery toy bird, red ware with green painted decoration. Tewa of Tesuque. New Mexico.

Jar with animal-head rattle in relief, and annular base, white ware with orange, red, black, purple, and brown painted decoration. Las Guacas, Nicoya, Costa Rica.

Two gold frogs. Sinu region, Colombia.

Gold figure of a man; human figure of gold. Vicinity of Bogota, Colombia.

Hair-plume of gold with face in relief; silver mask. Peru. (An account of the last six objects will appear in the next issue of *Indian Notes*.)

## INDIAN NOTES

*From Mrs. Thea Heye and Mr. Harmon W. Hendricks:*

Four stone bird-effigy club-heads; very small three-legged metate and mano, oval stone bark-beater, grooved about edge; five celts of varying sizes and forms; twenty-three celt-shape pendants of varying sizes, forms, decoration, and perforations; flat bar amulet with two perforations and animal-head at each end; bannerstone-shape amulet with two longitudinal perforations and incised decoration representing a conventionalized head; long rectangular pendant with two perforations, carved at the end to represent a human head; two green-stone pendants; two jadeite pendants; three pendants with notched and incised decoration; three effigy pendants; double-ended notched axe; carved effigy amulet; flat oval amulet with two perforations and incised and notched decoration on both ends; spear-head; cylindrical stone bead; barrel-shape jadeite bead; two pendant fragments; many glass beads of varying sizes, shapes, and colors; curved metal pendant. Nicoya, Costa Rica.

(Some of the exceptional stone objects here listed will be described in the next issue of *Indian Notes*.)

*From Major Otto Holstein:*

Eight photographs.

Six samples of cement. Temple of the Sun, near Moche, Peru.

Piece of slag. Temple of the Moon, near Moche, Peru.

*From Mr. Richard Joncas:*

Clay pipe. Eskimo. Fort Chimo, Labrador.

*From Mr. Clarence Jones:*

Arrowpoint. Nyack, New York.

*From Mrs. J. C. Joralemon:*

Five potsherds. Pamrapo village-site, Greenville, New Jersey.

Two potsherds. Kecoughtan, Virginia.

*From Mr. John M. Keith:*

Thirty stone beads. Southern Costa Rica.

*From Mrs. Willard Kent:*

Seventy-five hundred and sixty-seven arrow, spear, and drill points, knives, and scrapers; twelve hundred and eleven chipped implement blanks; four hundred and ninety-seven crude chipped celts, possibly used as skin-dressers; one hundred and twenty-four fragments of steatite dishes;

## INDIAN NOTES

seventy-six notched net-sinkers; fifty-three grooved net-sinkers; forty-eight hammerstones; twenty-six pitted hammerstones; notched hammerstone; forty-eight pestles; forty-seven celts; five gouges; grooved gouge; four gun-flints; graphite sharpening stone; five graphite paint stones; six pieces of worked graphite; sixteen grooved axes; argillite knife-blade; blank for bannerstone; crescent-shape stone object; perforated stone; fragment of celt, perforated at end; fragment of gorget; fragment of bannerstone; fragment of stone knife; small cylindrical stone object with pointed end; graphite pendant with serrated edge; flat oval steatite object; perforated oval stone grooved on top, twenty-one fragments of worked stone. South county, Rhode Island.

Splint basketry fish-trap; rectangular splint basket, painted decoration; rectangular splint basket; circular splint basket; circular splint basket with square base, painted decoration; circular splint basket with square base and handle, painted decoration; two circular splint baskets with handle; wooden mortar. Niantic, Narragansett, Rhode Island.

*From Mr. W. J. Kirby:*

Pottery crucible. Mound four miles west of Miami, Florida.

*From Miss Grace Nicholson:*

Three photographs. Eight photographic enlargements.

*From Miss Alice J. Pix:*

Pottery jar. Acoma, New Mexico.

*From Rev. Douglas L. Rights:*

Fragment of celt; nine potsherds; two fragments of arrow-points. Headwaters Brushy Fork creek, Davidson county, North Carolina.

*From Mr. Louis Schellbach, 3rd:*

Bundle of snares wrapped with cord; eighteen snares. Rockshelter near Baker, Nevada. (*To be described in the next issue.*)

*From Mr. John S. Stevenson:*

Fragment of celt; grooved axe. Lexington turnpike, Harrodsburg, Kentucky.

*From Mr. Everett Terhune, in memory of Mr. Thomas Hill:*

Large mortar. Pascack, New Jersey.

## INDIAN NOTES

*From Mr. Harry Vacher:*

Fragment of celt. Green Ridge, Staten Island, New York.

*From Mrs. John Jay White:*

Wampum belt. Abnaki.

*From Mr. L. Winternitz:*

Eleven photographs of Ottawa Indians.

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# INDIAN NOTES

## NOTES

AN EXCHANGE of objects has been consummated with the Rijks Ethnographical Museum at Leiden, Holland, the result of which has enabled the Museum to fill certain lacunæ in its collection of materials illustrating the ethnology of the Carib and the Arawak of Surinam. The more noteworthy specimens include a basketry headband decorated with feathers and surmounted by six long plumes; four war-clubs, one of which is elaborately decorated with engraving; different types of baskets; a woven cotton manta with black-painted decoration, and a bow with several kinds of arrows. Among the smaller objects are gourd dippers and other gourd vessels with incised and painted ornamentation; a basketry dance rattle; a package of native cigarettes about nine inches long. Musical instruments include a drum with painted head and a bamboo flute elaborately incised, the incision of the latter having been filled with black pigment.

From the same Museum have also been procured a collection of about fifty archeological specimens, mostly from the islands of Aruba, Curaçao, and Bonaire, of the Dutch West Indies, including celts, axes, shell implements, and a series of interesting potsherds. From Aruba also are two

## INDIAN NOTES

burial urns, one of which is eighteen inches high, while the other, not quite so tall, has a width of twenty-one inches. It will be recalled that objects from the islands mentioned are described by Dr. J. P. B. Josselyn de Jong in his *Praecolumbian and Early Postcolumbian Aboriginal Population of Aruba, Curaçao and Bonaire*, Leiden, 1918-19. Other archeological objects are from Venezuela and northern Brazil, the most noteworthy being a crystal labret, about five inches long, from the latter country.

AN IMPORTANT collection of Peruvian material, gathered by Mr. Ernest F. Belli, has been procured by the Museum. Among the earthenware vessels are three hundred and sixty-five specimens of Nasca ware. There are also forty-four textiles, including a fine featherwork band, the front of a feathered shirt, and an excellent poncho woven in various designs and colors; an atlatl with a bronze hook; an unusual wooden club used probably for killing fish; a well-worked shell trumpet, and an unusual basket containing spinning implements and having an ornamented cover.

THROUGH the characteristic generosity of Mrs. Thea Heye the Museum has become the possessor of a rare basket (fig. 71) from the former mission

## INDIAN NOTES

of Santa Inéz, California, the neophytes of which were largely Chumash, who are now regarded as extinct. In design and technique the basket is similar to the ancient Chumash example described and illustrated in *Indian Notes* for July

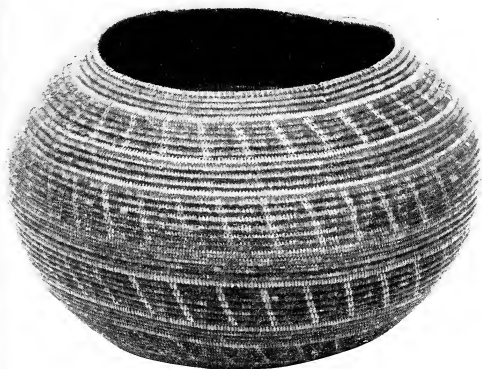


FIG. 71.—Basket from old Santa Inéz mission, California.  
Diameter 8.75 inches. (15/0)

1926 (fig. 65, *a*), although the two differ in form. The present specimen has eight coils to the inch, the coils consisting of rods woven with a species of rush, or *Juncus*. The weaving is fairly fine for a basket of such size, having nineteen to twenty

## INDIAN NOTES

stitches to the inch. The five rows of triangular pattern are woven in black, while the body of the basket is mottled brown.

WE REGRET to record the death at Escondido, California, on January 12, of George W. Avery, who at intervals for many years has gathered collections for the Museum. In 1914 he visited Tiburon island in the Gulf of California, where he procured various objects illustrating the material culture of the Seri Indians, who, notwithstanding their isolation, have been greatly modified by contact with civilization in recent years. Subsequently, with a similar object in view, Mr. Avery collected material from the Yaqui and Mayo tribes of Sinaloa, and explored certain village-sites in southern Sonora, as well as caves containing remains of ancient occupancy.

AN EXCEPTIONALLY fine pestle from Porto Rico (fig. 72), purchased in Paris by the Director, is embellished with a carved human figure at its upper end, the head of which is provided with prominent ear-ornaments. This excellent implement is one of very many artifacts which the Museum has acquired in Europe from time to time during the course of a number of years, including some fine examples of quill embroidery from Indians of the

## INDIAN NOTES

eastern part of the United States and Canada which doubtless found their way across the sea in Colonial times.

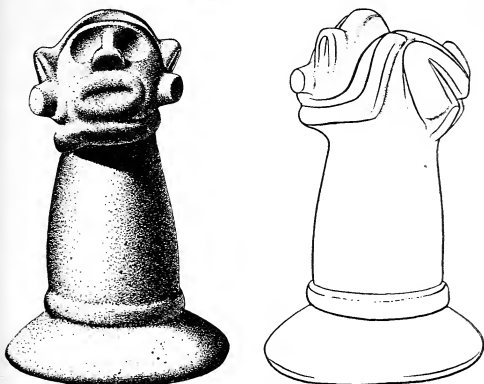


FIG. 72.—Stone pestle from Porto Rico. Height 7 inches.  
(15/768)

THE MUSEUM is now the fortunate possessor of the collection of Eskimo objects gathered chiefly from the surface on the shores of Ponds Inlet by Mr. George Palmer Putnam during the operations of his Greenland expedition last summer. The collection includes bone and ivory pendants and harpoon- and arrow-heads, steatite lamps, dishes and various other objects of wood, and stone

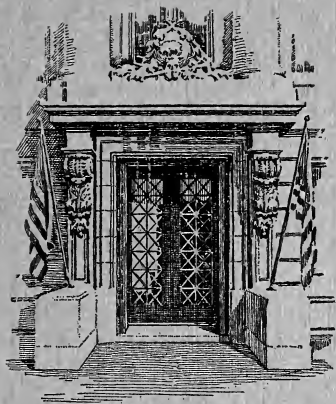
knives. There were also acquired two complete suits of clothing for a man and a woman of the Greenland Eskimo.

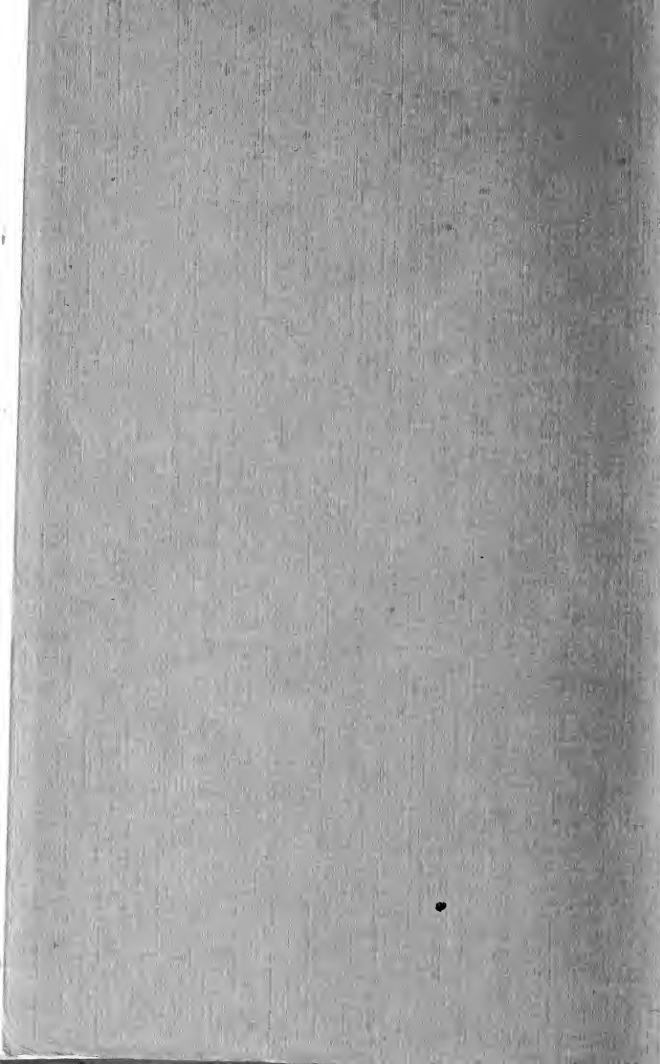
THE MUSEUM has recently purchased an interesting lot of thirty-two reed arrows, collected about 1895 from the White Mountain Apache in the vicinity of Fort Apache, Arizona. The arrows are provided with white stone points, very conventionally chipped. Their wooden fore-shafts are decorated with black gum, and the main shafts are ornamented also on the feathered end, some with two bands, others with a single band of red paint and a band of black paint.

PROF. MARSHALL H. SAVILLE was elected president of the American Anthropological Association at its annual meeting held at Philadelphia, December 28-30. At the same meeting Mr. F. W. Hodge was designated to represent the Association in the National Research Council for three years, beginning July 1, 1927.

MR. HEYE has been selected as a member of the organization committee of the XXIII International Congress of Americanists which is to hold its next session in New York City in September, 1928. At the first meeting of the committee Mr. Heye was elected treasurer.







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EFFIGY JAR. COSTA RICA

HEIGHT,  $9\frac{7}{8}$  INCHES. (15/1680)



PROFILE OF EFFIGY JAR





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## A NICOYAN POLYCHROME VASE

AMONG the recent acquisitions of the Museum is a collection of stone and pottery objects from Costa Rica, received through the generosity of Mrs. Thea Heye. This collection includes an unusually fine and instructive example of the polychrome effigy vessels manufactured in northwestern Costa Rica and the adjacent portion of Nicaragua (pls. v, vi)—a vase with slightly recurved walls and flaring base. From one side projects a carefully modeled bird-head with a raised gorget beneath. Wings are indicated by bosses and painted decoration in black, brown, red, and orange. We propose to discuss the features of this vessel both in relation to local wares and to Middle American pottery in general.

Effigy vessels of the type illustrated in the colored plates are most characteristic of the Nicoya peninsula in northwestern Costa Rica, and also

occur frequently in the northern highlands of Costa Rica and in southern Nicaragua.<sup>1</sup> Trade pieces of this ware have been obtained from several places in Salvador, also from Copan and the Ulua valley in Honduras. However, the type in general—that is to say, an effigy effect produced by attaching head, legs, wings, tail, etc., to the walls of pottery vessels—extends over a vast area. It has been noted in black-on-white ware vases from Pueblo Bonito in New Mexico, at Casas Grandes in Chihuahua, in Toltec and Totonac pottery from central Mexico, in Guatemala and other Central American countries, in Colombia and the West Indies, in Ecuador, Peru, and north-western Argentina.

In at least three instances—in New Mexico (Pueblo Bonito), Honduras (Copan), and Peru (Recuay)—there is reason to attribute an age of many centuries to this effigy type. Thus not only the total distribution is wide, but the ancient distribution is also. Hence we are justified in believing that such vessels are one of the basic New World pottery types.

Coming to the question of origins, little can be said except that this particular kind of effigy jar is not characteristic of either early Archaic or

<sup>1</sup> See the author's *Pottery of Costa Rica and Nicaragua*, *Contr. Mus. Amer. Ind.*, *Heye Fdn.*, vol. VIII, 1926.

## INDIAN NOTES

early Maya pottery. Without minimizing the importance of the Archaic and Maya cultures, we see that fundamental pottery types developed uninfluenced by them in centers as yet undetected by archeologists.

Tall jars set on flaring ring bases, with or without effigy character, also are a widely distributed pottery type. They were manufactured in great numbers in northwestern Costa Rica by the Chorotega and their neighbors. From the pottery of this region it appears that the shape developed from the practice of setting round-bottomed vessels on a stand of hour-glass shape. Not only are bases of this form recovered from the ground by excavation in Costa Rica but the separate identity of the base is often preserved, as in pl. v, by a raised ridge on the lower part of the vessel.

Jars with flaring ring bases are also common eastward from Mexico City to the Gulf of Mexico. In that region they are of Toltec or Totonac manufacture and apparently are not of great age. They are found also in northwestern Yucatan, where it is believed that, although of Maya handiwork, they do not antedate the period of Toltec domination.

Between these two possible centers of distribution for jars with flaring ring bases other examples are found sporadically except in the Maya ruins

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of the Old Empire period. We judge that these finds indicate Mexican rather than Costa Rican influence, for they lack the characteristic encircling ridge of the latter.

However, that the development of this shape did not take place independently in the Vera Cruz region of Mexico and in Costa Rica is suggested by the relationship of patterns found on several types of pottery in these areas. This relationship is especially striking in the case of dragon motives, highly conventionalized on parallel lines in each instance.

To the south of Costa Rica vases with flaring ring bases are such rarities that, taken by themselves, they might be regarded as a foreign element, even though their distribution is continuous but sparse down the west coast of South America as far as Peru (Recuay). However, in northwestern South America bowls set on high flaring ring bases are so common that this area may well prove the center where the flaring ring base was conceived.

At any rate, this feature of the jar under discussion is decidedly not characteristic of either early Archaic or early Maya pottery, generally regarded as the parent Middle American cultures.

Associated with the problem of the flaring ring base is the question of pottery vessels supported

by three or four legs. In Costan Rican ceramics most of the New World types are present. Most common of these are vessels standing on human or animal heads, three in number, which rest upon the chin (fig. 73, *f*). Similar vessels are frequently found in the Vera Cruz region in Mexico (fig. 73, *e*) and in northwestern Yucatan. They date apparently from the period of Toltec ascendancy. However, the type is more ancient, for it has been found in Old Empire Maya ruins, but in such small numbers and with such decoration that it cannot be regarded as a Mayan invention. It does not occur in Archaic pottery. The distribution of this leg type is approximately that of the northern group of flaring ring base jars.

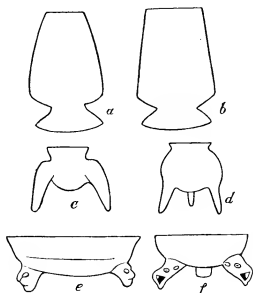


FIG. 73.—Widely distributed pottery types. *a*, Manabi, Ecuador (after Saville); *b*, Vera Cruz, Mexico (after Joyce); *c*, Finca Arevalo, Guatemala (Bates Jáuregui collection); *d*, Imbadura, Ecuador (after Jijón y Caamaño); *e*, Vera Cruz, Mexico (after Strehl); *f*, Nicaragua (after Lothrop)

Another kind of tripod is characterized by long,

slender, spindle-like legs (fig. 73, *c*, *d*). It is sometimes adorned, especially in the Guetar region of Costa Rica and in Chiriqui, with human or animal figures in Atlantean attitudes. Its presence has been noted in Guatemala (Finca Arevalo), Honduras (Bay Islands), Costa Rica (common), Panama (common), Colombia (common), Ecuador (common), and Peru (Recuay). In Ecuador it has been determined archeologically that the type is ancient. Although common in parts of Central America, it is totally foreign to Archaic and Mayan art. The distribution of this leg type is approximately that of the southern group of flaring ring base jars.

Legs on pottery vessels of early Archaic manufacture are sometimes made in the form of feet. Usually, however, they are solid, conical, and four in number. From this developed a hollow, mammiform type which is reflected in early Maya pottery and also in Costa Rican pottery.<sup>2</sup>

Maya pottery legs of early times are typically solid and round or oval, or else hollow and cylindrical or mammiform. In either class they are usually four in number.

As in the case with the other features discussed, Maya and Archaic pottery leg types do not seem

<sup>2</sup> Ibid., pl. cii, ciii; also *Indian Notes and Monographs*, vol. 1, no. 4, figs. 4-8.

fundamental, for the forms typical of these cultures are not so common nor so widespread as others. It is noteworthy that of the types enumerated only the spindle leg occurs in South America. There it is so common that we judge that it must have been distributed from an as-yet undetected center in that continent.

While the general character of Costa Rican effigy vessels is determined by the modeling, at the same time much detail is added in paint. In the present instance (pl. vi) painted detail has been freely used on the head, neck, and wings. Most of this decoration is intended to represent feathers, and this particular jar is unusual in that seven different feather

motives are employed, all so conventionalized that the identification of their nature depends on their association with bird effigies. These seven feather patterns we have brought together in fig. 74, *a-g*, adding thereto different feather motives (*h, i*) from other vessels of the same ware. It is the persistence of such elements as these which

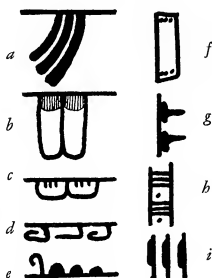


FIG. 74.—Feather motives.  
Nicoya peninsula, Costa  
Rica

makes possible the identification of geometric patterns developed from zoöomorphic prototypes.

Running from side to side of the vessel behind the wings (pl. vi) is a painted panel depicting a series of animal figures set off by a black background. This technique, strongly suggestive of negative or wax painting,<sup>3</sup> extends from Costa Rica through the cities of the Maya Old Empire to the Toltec and Totonac pottery of east-central Mexico. It thus bridges the gap between the regions of true negative painting in Middle America (Jalisco, Mexico, to western Honduras) and South America (Costa Rica to northern Peru). Negative painting does not appear on Archaic pottery, and is so rare on Maya Old Empire pottery that it must be regarded as a foreign element, even though examples from Copan and Holmul are the most ancient pieces known at present. The frequent use and technical mastery of negative painting in Colombia and Ecuador, on the other hand, suggest that it must have come originally from that region.

The animal portrayed in silhouette on the painted panel is probably the jaguar. The normal

<sup>3</sup> Patterns are painted in wax, after which the entire vessel is dyed a dark color. The wax is then removed, allowing the pattern to show against a dark background. This technique is still employed for decorating gourds by Pipil Indians in Salvador. See *Indian Notes*, vol. II, no. 1, fig. 8, g.



attitude is with the head turned forward as in fig. 75, *b*, and it is thus presented on the vessel under discussion with the exception seen in fig. 75, *a*, where, on account of the exigencies of space, the artist had to turn the head backward over the shoulder. One fore-paw was also carried with the head, and may be seen just below the nose. At the same time two front feet and one hind-foot are depicted in the normal position. We thus have two stages in the process of conventionaliza-



FIG. 75.—Painted panel from effigy jar, Costa Rica. (15/1680)

tion presented on a single vessel, which well illustrates the caution necessary in assigning chronological sequence to the development of design.

At the extreme top and bottom of the vessel are encircling panels composed of parallel lines broken up into bands by means of contrasting colors. Such panels are typical of the pottery of Tola in southern Nicaragua and of Bolson in Costa Rica on the Gulf of Nicoya. The other

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painted motives on this jar, however, are not typical of Tola ware, therefore we conclude that this specimen is from the vicinity of Bolson, where the silhouette jaguar pattern is very frequently seen.

The vessel here discussed belongs to a pottery group of strong local flavor, but we have shown that on careful analysis its shape, its modeled decoration, and its painted decoration all fall in categories of wide distribution. We have also shown that none of these features developed in the cultures generally regarded as basic, the Archaic, Maya, and Peruvian. As a matter of fact, the earliest culture level yet detected by students of New World archeology is that of the Basket-makers, who flourished in southwestern United States before the advent of pottery. From what is known of the development of culture there, it seems that the last phases correspond most closely to the earliest yet known in Middle America, where there is every reason to believe we have not reached comparable archeological floors. We must conclude then that the widespread and persistent features illustrated in the vessel here discussed must have sprung from ancient forms as yet undiscovered or from creative centers as yet unidentified.

S. K. LOTHROP

## INDIAN NOTES

### PATHOLOGIC PLAGIOCEPHALY IN A NEVADA SKULL

AMONG the skeletal material collected by Mr. M. R. Harrington on an expedition of the Museum to Pueblo Grande de Nevada, conducted by him in 1924, there is a skull of extraordinary appearance. It represents a case of what is known in craniology as plagiocephaly, i.e. oblique-headedness. Such a condition may be the result either of intentional or unintentional pressure (cradle-board or carriage of the child on its mother's back), or it may be due to pathologic processes, preëminently the premature obliteration of one or more of the great cranial sutures or parts thereof. The case in question is clearly one of pathologic origin, due to the total obliteration of the entire left half of sutura coronalis, as may be seen in figs. 76, *b*, and 77, *a*, representing normæ lateralis and verticalis. It may not be superfluous to call attention to the fact that premature and senile obliterations of sutures differ in their natures. They occur at different ages—the premature in fetal or early infantile, and the senile during the last periods of life; the former impedes the growth of the brain in its specific region, giving rise to compensatory expansion in some opposite direction, while the latter simply indicates the



*a*



*b*

FIG. 76.—Normæ frontalis and lateralis of plagioccephalic skull from Pueblo Grande de Nevada



FIG. 77.—Normæ verticalis and basilaris of plagioccephalic skull from Pueblo Grande de Nevada

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termination of cerebral growth and, hand in hand therewith, the cessation of osseous growth in the sutural areas.

In the present case compensatory expansion has

operated in two ways: (1) in bulging out the postero-parietal right cranial side and (2) in pressing the cranial roof upward, which even runs over into a sagittal crest. These two principal alterations appear to be still further emphasized by cradle-board pressure, causing a marked ap-



FIG. 78.—Norma occipitalis of plagiocephalic skull from Pueblo Grande de Nevada

planation of the left occipital region. This is clearly not a case of intentional deformation, judging by other specimens from the same site.

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It appears from the mid-sagittal perigram of the skull as if the cranial contour, bulged upward and forward, were tilted over anteriorly, as shown by the forward displacement of the bregma and, in consequence thereof, the erection of the frontal bone (chord), the postbregmatic elevation, and the vertical orientation of the orbit. This is counterbalanced by the inordinate protrusion of the alveolar process, enhanced by a slight degree of proclivity, the entire protrusion quite probably being a response to the peculiar distortion. The orbits are rather low, displaying a tendency toward horizontal orientation which is aided considerably by the roundness of their lower lateral angles. The nasal aperture is quite medium in width, with a distinct spina nasalis, but an indistinct border of the lower incisure.

The osseous relief is not especially pronounced. Superciliary eminences are moderately developed, the occipital muscular ridges are slightly more distinct, and the mastoid processes somewhat slender and long, showing strongly rugged outer surfaces of muscular insertion commensurate very probably with the muscular action which served to adjust the disturbed cranial equilibrium. The foramen magnum is remarkably small. The palate is distinguished by a slender torus palatinus which in its various forms is characteristic of the Ameri-

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can Indian. The incisor teeth display lingually the familiar Indian shovel-shape, and while there is also a labial indication, this is not so pronounced. The lower jaw is well formed, quite robust, and possesses only a weak chin protrusion.

The principal measurements from which the peculiar disproportions may be judged are assembled in the following table:

Cranial length.....	154 mm.
"    breadth.....	143 "
"    height.....	145 "
"    base.....	99 "
Foramen magnum length.....	31 "
"    width.....	26 "
Minimum frontal breadth.....	90 "
Upper facial height.....	72 "
"    length ( <i>ba-pr</i> ).....	106 "
Bizygomatic breadth.....	130 "
Orbital width ( <i>mf</i> ).....	41 "
"    "    ( <i>la</i> ).....	38 "
"    height.....	33 "
Nasal height.....	49 "
"    width.....	26 "
Height of ramus.....	60 "
Breadth "    ".....	38 "
Cranial L-Br index.....	92.9
"    L-H    ".....	94.2
"    Br-H    ".....	101.4



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Transverse fronto-parietal index.....	62.9
“      cranio-facial      “ .....	91.0
Upper facial      “ .....	55.4
Orbital      “      ( <i>mf</i> ).....	80.5
“      “      ( <i>la</i> ).....	86.8
Nasal      “ .....	53.1
Ramus      “ .....	63.3

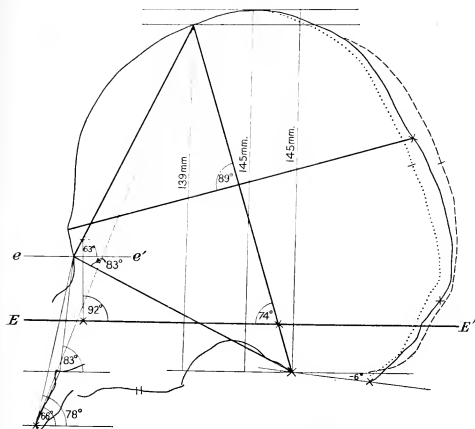


FIG. 79.—Mid-sagittal perigram of the plagiocephalic skull. The broken and the dotted lines indicate respectively the greatest abnormal expansion and depression equidistant from the median plane. Crosses mark the familiar measuring points; intersecting dashes indicate sutures traversed by the curves.  $E-E'$ , ear-eye plane;  $e-e'$ , parallels to ear-eye plane.

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The cranial perigram (fig. 79) also demonstrates the distortions referred to. By means of a broken line the varied occipital outlines indicate that the greatest extent of the bulging occurs on the right cranial side, being displaced 22 mm. laterally from the mid-sagittal plane, while the dotted curve, equidistant from the mid-sagittal, indicates the depression on the left side of the cranium. Both varied lines are drawn only as far as the level of the posterior border of the foramen magnum (opisthion), thus coinciding in length with the mid-sagittal curve. The cranial height and glabella-lambda lines preserve their rectangularity (*Klaatsch*) in spite of the distortion,—which latter, however, is quite obvious by the angle between the height line and the ear-eye plane,—while the cranio-facial (*Falkenburger*) angle of  $83^{\circ}$  shows quite plainly the effects of distortion. The other angular relations readily explain themselves from the perigram. Attention may be called however to the marked degree of prognathism, particularly that of the alveolar process.

*Aichel*<sup>1</sup> has shown recently that anomalies in cranial shape may be due to intracranial causes and that premature obliteration of sutures does

<sup>1</sup> *Aichel, Otto*, 1926, Zur Frage der Entstehung abnormer Schädelformen. *Verh. Ges. Phys. Anthr.* (Anthr. Anz., III, sonderheft), pp. 16-31.

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not in every case produce abnormal forms. In the specimen briefly described here, however, there can be no doubt as to the pathological cause of premature suture obliteration in bringing about the abnormality discussed.

BRUNO OETTEKING

### SOME GOLD ORNAMENTS FROM SOUTH AMERICA

A RECENT addition to the collection of objects of precious metals from South America, the gift of Mrs. Thea Heye, contains several pieces of considerable interest. Among these, the mask illustrated in fig. 80 is the only one made of silver. Four and a half inches in total height, the large protruding oval eyes and the diminutive mouth are so unusual that we are unable as yet to assign the mask definitely to its proper culture area; but it may be conjectured that it came from either Peru or Colombia. We have not found anything analogous to it illustrated in the numerous publications treating of metal objects from South America.

A plume made of high-grade gold (fig. 81) was derived probably from the area of Inca or pre-Inca culture in Peru or Ecuador. Ten and seven-sixteenths inches in height, it is decorated with a

conventional human face, and the ends of the three upper parts are ornamented with designs in repoussé. Similar plumes are often represented on Peruvian pottery, and the Museum possesses a golden crown from Sigsig, southern Ecuador,<sup>1</sup>



FIG. 80.—Mask of hammered silver.  
(15/2032)

which has three plumes or aigrets, the largest one, with pendent discs, being in front, while the two others, one solid, the other cut into two parts, are at the back. Plumes decorated like the one illustrated are rare. Both

the silver mask and the gold plume were fashioned by hammering.

The two hollow human figures illustrated in fig. 82, *b*, *c*, are of *tumbaga*, a soft alloy of varying

<sup>1</sup> M. H. Saville, *The Gold Treasure of Sigsig, Ecuador*, *Leaflets Mus. Amer. Ind.*, Heye Fdn., no. 3, New York, 1924.



FIG. 81.—Plume of hammered gold from Peru. (15/2031)

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proportions of gold, silver, and copper, usually dull-copperish in color, but sometimes of a pale greenish-gold tinge, the tone depending on the



FIG. 82.—Frog and hollow human figures of gold and tumbaga from the vicinity of Bogota, Colombia. (15/2028-2030)

predominance of one or another of the component metals. The specimen presented in *b* is decidedly reddish, showing a considerable proportion of

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copper in the alloy. The smaller figure (*c*) is more yellowish. Both specimens are crudely modeled, and were cast, but were given little polishing to remove the irregularities resulting from the casting. These figures are of a type that identifies them with the Chibcha culture which once flourished in the highlands of Bogota, Colombia. The larger specimen is  $4\frac{3}{4}$  inches high, the smaller massive one  $2\frac{3}{16}$  inches.

Fig. 82, *a*, is a hollow frog, two inches in length, cast in almost pure

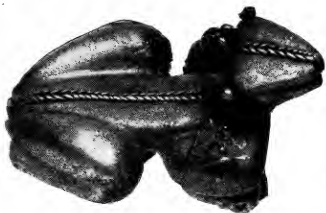


FIG. 83.—Conventional animal figure of tumbaga, probably from Colombia.  
(15/2027)

gold. Golden frogs are found in several culture areas in northwestern South America, including the Rio Sinu and the states of Antioquia and Cauca in Colombia, and are especially frequent in Costa Rica, and in Chiriqui, Panama.

The last object to be noted (fig. 83) represents a crouching animal of rare type. A somewhat analogous twin "mythological animal god," attributed to the region of the district of Riosucio,

State of Cauca, Colombia, has been figured by Wright.<sup>2</sup> In technique it is similar to our specimen, the same conventional animal being represented, hence it may probably be assigned to the Quimbaya culture, famous for its large and beautiful human figures and canisters of gold, exemplifying the highest achievement of the ancient peoples of Colombia in the goldsmith's art. The figure is  $3\frac{1}{4}$  inches long.

MARSHALL H. SAVILLE

### THE COYOTE'S BOXELDER KNIFE

THIS is a story which was told among the people of the Arikara tribe to young boys of ten or twelve years of age to stir their imagination. The story relates that a man was sitting in his eagle pit on a distant and lonely hill, intent on catching eagles to obtain their plumes to be used in making war-bonnets and badges of military honors.

It should be said that men who went out to capture eagles made pits on high and remote places frequented by eagles. These pits were so made that the man could sit in one while he waited and watched for the eagles to come. They had poles

<sup>2</sup> Bryce Wright, *Description of a Collection of Gold Ornaments from the Huacas or Graves of some Aboriginal Races of the North Western Provinces of South America* belonging to Lady Brassey, London, 1885, p. 22, fig. 24.



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laid across them, and on these poles a covering of sod was laid so as to conceal the pit and all evidence of its presence. A dead rabbit or some other bait was fastened on the surface of the pit cover in such position that when the eagle alighted to take it in his talons the man could reach his hand through an opening and seize the eagle by the feet.

So this story tells of a man who was sitting thus in his eagle pit and while he was waiting he heard a voice in the distance crying out and in words like the speech of a human being saying: "I want a knife! I wish to have a knife!"

The man cautiously peeped out from his hiding place to see who might be the speaker. To his surprise the man could see no human being anywhere, but down at the foot of the hill he saw a coyote trotting along in the coulée. It was the coyote which was crying for a knife.

And now as the man listened he heard another voice answering the coyote's cry and saying, "Come here!" Then the man saw the coyote go to the place from which came the voice. At that place there stood a boxelder tree. It was the boxelder tree which had called in answer to the cry of the coyote. When the coyote reached the place where the boxelder tree was, the tree said: "Do you now take one of these my seeds in its husk, which as you see resembles the shape of a

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knife. If you will take up one of them and strike it upon the ground it will become for you veritably a knife. So you shall have what you require."

The coyote did as he was told by the tree, and the seed became a knife which he carried along with him as he went on his way.

Presently the coyote saw a fat badger ambling up the next hill. The coyote pursued the badger and soon overtook him. Now with his knife he cut the badger's throat so that it soon bled to death. Then he looked for his knife again, but there was no knife anywhere to be seen. But he found only the boxelder seed again as it was at the first.

MELVIN R. GILMORE

## OBSIDIAN EAR-ORNAMENTS

IT FREQUENTLY happens that small objects, lacking something of the spectacular, escape the attention of the casual visitor to a museum, and indeed sometimes even the student will pass such specimens by because of their seeming lack of any striking feature, although from a technical point of view they may be of unusual interest and importance.

Included in the collections of this Museum are many artifacts made of obsidian, or volcanic glass.

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Some of these, such as arrow- and spear-points, were produced in great numbers, requiring but little skill in their manufacture for the reason that obsidian may easily be flaked. Extremely sharp and efficient knives were so perfectly flaked from a core of obsidian that no further flaking or chipping was necessary.

Double-edged blades from four to six inches or more in length and about half an inch wide were thus produced, with a midrib rarely more than an eighth of an inch in thickness. Other objects were fashioned, such as mirrors, amulets, and labrets, which required more skill



FIG. 84.—Obsidian ear-ornament from Santiago de Tlatiluco, Valley of Mexico. Actual size. (o/8412)

and patience; but the most remarkable of all are certain ancient spool-shape ear-ornaments from the Valley of Mexico.

Figure 84 illustrates an obsidian ear-ornament a description of which applies likewise to two others displayed in the Mexican exhibit of the Museum. As examples of craftsmanship these specimens

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are unequaled among the many delicate objects produced by the ancient aboriginal artisans, a fact that can be better appreciated when the nature of the material of which they are made is considered. Obsidian is very dense and brittle, hence pressure or a slight blow properly applied will result in a perfect flake.

The methods ordinarily employed in the manufacture of stone objects consisted of flaking, chipping, pecking, grinding, and polishing. Doubtless the first step employed in fashioning ear-ornaments from obsidian was flaking, in order to roughly shape the block of raw material; then followed chipping, grinding, and polishing. This conclusion is based on evidence afforded by comparison with two smaller obsidian objects in the collection, of the same shape as the ear-ornaments, but which are in an unfinished condition. One of these especially shows chipping on the surfaces of the flanges, done to reduce the object to the desired thickness before grinding was commenced. Some of the chipping or flaking may have been done to reduce the diameter to the approximate size desired, but the grinding has been carried so far that only traces of the flaking are left. The channel around the central column has been almost completed by the grinding process, but the fact that one of the flanges is broken is probably the

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reason for its unfinished state. The ground surface indicates that the abrasive material employed may have been a bit of sandstone or loose grit borne by a piece of wood. The exact process of manufacture can only be surmised; but we know that stone objects were perforated with a drill rotated by means of a bow, the so-called pump-drill, or the shaft of the drill was revolved back and forth between the palms. These methods are illustrated in ancient sculptures and in the native codices of Central America. There are numerous objects exhibiting partly drilled perforations made with a hollow drill, such as a reed, which carried grit as a cutting medium during the process. It may, therefore, be assumed that the central columns of the obsidian ear-ornaments were perforated with a drill, and in all probability with a hollow one. In both operations, grinding and drilling, water was used with the grit. The skill of the artisan is especially displayed by the exquisite finish imparted to the ear-ornaments and by the incredibly even thickness of the walls of the columns and the flanges. The finishing operation removed every trace of abrasion due to grinding in the primary stages of manufacture.

With regard to dimensions, the extreme diameter across the flanges is one and seven-sixteenths of an inch; the perforation is seven-eighths of an

inch in diameter. From front to back, that is from end to end, the spool is five-eighths of an inch. The edges of the flanges are a thirty-second of an inch, expanding to a sixteenth of an



FIG. 85.—Method of wearing an obsidian ear-ornament.

inch where they join the column; while the walls of the column, with very little variation, are a trifle more than a thirty-second of an inch thick. The color of the obsidian is greenish black. As demonstrated in our illustration (fig. 84), the material is as transparent as a piece of smoked optical glass, for the rear flange is clearly shown through the walls of the central column.

The manner of wearing such an ornament is shown in figure 85. The lobe of the ear was pierced and the perforation enlarged gradually by the insertion of plugs of successively increasing sizes until it was large enough to accommodate the ornament. As such a method is employed by modern peoples who wear ornaments of this kind, there

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is no reason to believe that the ancients did not use similar means.

WILLIAM C. ORCHARD

### A CREEK SITE IN GEORGIA

SITUATED on a swamp island that forms the east bank of Oconee river near its junction with Town creek, southeast of Milledgeville, Baldwin county, Georgia, is the site of an old Creek village. The island, known as Indian island, rising above the surrounding swamp that borders the river at this point, formed an ideal situation for a village, its area affording ample ground both for dwellings and for cultivation, its steep banks giving protection against flood and enemy attack, and the river which borders it on the west providing excellent fishing as well as serving as a route for travel.

From historical accounts it is known that the Oconee branch of the Creek Nation once inhabited the banks of the river that now bears its name, and mention is made of an Oconee town south of Rock Landing, below Milledgeville. If the site on Indian island is not the one referred to, it certainly was occupied by the Oconee at some time, as historical data and archeological remains attest.

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Two mounds, a hundred feet apart, mark the site. The larger had a maximum circumference of 488 feet and a maximum height of 17 feet, while the dimensions of the smaller were 287 feet in circumference and 11 feet in height. The land on which the mounds stand is a flat cleared area that



FIG. 86.—Creek bowl from mound on Oconee river, Georgia (restored). Diameter, 14.5 inches. (15/2135)

formerly was cultivated. During that time several large earthenware vessels and other aboriginal objects were uncovered by plowing, and these were sent to the National Museum at Washington.

About thirty years ago two residents of neighboring towns undertook to excavate the smaller mound. They employed a negro to do the work,



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and it was from him that the writer learned of the results of their search. According to him a number of specimens were uncovered, including pottery vessels, shells, and three flint knives. It is undoubtedly true that such finds were made, as the narrator gave a circumstantial account of the work and of the material recovered that could



FIG. 87.—Creek bowl from mound on Oconee river, Georgia (restored). Diameter, 14 inches. (15/2137)

not have been the product of his imagination. What became of these specimens is not known.

The island is now part of the "Indian Island Farm and Ranch," owned by Mr. John W. Shinholser of Macon, Georgia. During the months of May, June, and July, 1926, the smaller of the two mounds was opened under the direction of the

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writer and with the coöperation of Mr. Shinholser, who not only manifested his interest throughout, but generously met the expense incident to the excavation.

It was found that the mound was composed, from its base upward, of strata of clay, yellow topsoil, and loam of varying thicknesses. The clay



FIG. 88.—Creek pottery from mound on Oconee river, Georgia.  
Height of the larger, 4.75 inches. (15/2138, 2139)

was mixed with charred bone, charcoal, and small potsherds. The five burials uncovered were in the layer of yellow earth above the clay, and though the direction and position of the skeletons were ascertainable, the bones were in such an advanced state of decay that preservation was impossible.

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The mound provided few artifacts. Some small univalve beads, most of which were associated with burials, a large conch, and several stray pieces of unworked freshwater shell, comprised all the shellwork objects found. A beautifully made black flint knife and a celt accompanied the first burial encountered.

The pottery, quite characteristic of that part of Georgia, as a whole was made of drab-colored clay tempered with ground quartz, and because of its



FIG. 89.—Creek vessel from mound on Oconee river, Georgia (restored).  
Height, 15.25 inches.  
(15/2122)

coarseness was greatly affected by dampness and the network of roots that penetrated the mound. The vessels were ornamented with designs either stamped or incised. The small dissociated fragments well illustrate some of the varieties of incised geometrical designs. When

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restored, some of the vessels proved to be of unusual size, and two are almost identical with those found in the surrounding field years ago.

The mound proved less fruitful than would be expected from its dimensions, but sufficient objective material was obtained to enable its identification as that of a settlement of the Creeks.

MARGARET E. ASHLEY

### ANTLER IMPLEMENTS FROM NEW YORK CITY

INTERESTING evidences of the aboriginal occupancy of the territory now included in New York City are constantly coming to light. Such remains are found in the débris of ancient camp- and village-sites, and with burials; generally they are unearthed during the course of street building or apartment-house construction.

During March, 1927, workmen excavating for the erection of an apartment house at 205th street and Seaman avenue, Inwood, uncovered three Indian burials. Mr. Foster H. Saville, of the Museum, was notified when the first remains were found and attended to the removal of the skeletons. Aside from a bone awl and a few small fragments of pottery, nothing of importance was noted in

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connection with the first two burials. The bones themselves were in such bad condition that they disintegrated on exposure. The remains were approximately three feet below the surface of the hillside in which they were found. It may be added that they were in the same plot, in light sandy soil, on the southern slope of the hill, between 204th and 205th streets, along Seaman avenue, in which Messrs. W. L. Calver and Reginald Pelham Bolton formerly uncovered numerous burials. Little in the way of worked implements, pottery, or other artifacts, however, were discovered with those remains.

On the evening of March 25th last the foreman of the excavation notified the Museum that a third burial had been disturbed. Mr. Saville, accompanied by the writer, immediately visited the spot, only to find that the skeleton, evidently that of an adult, was so badly broken and scattered by a steam-shovel that it was impossible to determine age or sex, and that the bones were worthless for study.

While Mr. Saville was recovering what remained of this skeleton, the writer excavated farther in the shell-pit, soon uncovering skeleton No. 4, which rested on the clay bottom of the pit, on its left side in a flexed position, facing west, at a depth of three and a half feet below the surface of the

## INDIAN NOTES

top-soil, or approximately three feet beneath the original surface of the hillside.

In uncovering this burial the fragmentary skeleton of a dog was encountered near the right



FIG. 90.—Antler tools from Inwood burial. Length of longest, 7 inches. (15/2844)

hip of the human skeleton, and the lower jaw-bone and fragments of the skull, ribs, and other parts of a second dog were found in front of and near the top of the human skull.

By this time a crowd of curious onlookers had thickly surrounded the excavation, making the work difficult. In uncovering the right femur, the writer took out the broken butt of the first of the odd antler implements shown in fig. 90. This in itself was rather unusual, but in the next few moments three similar objects were removed, all apparently having been buried in close proximity and in an orderly manner near the right knee of the skeleton.

Dusk now having fallen, the remains were buried until early the following morning, when the writer was fortunate enough to recover the tip of the first implement found.

The objects are complete and in appearance are unusually well preserved, although by reason of the spongy core of the antlers having partly disintegrated through long interment, the implements are much lighter in weight than originally. The longest is seven inches in length.

The most interesting feature is the manner in which the implements have been worked. In each case the tip of the antler has been worn to a smooth rounded point, with a sharp edge. The broken one, indicated by the repaired fracture, gives evidence of having been the most used. Owing to the peculiar smooth patina on the worn surfaces of the tools, which displays no irregular

scratches or abrasions that might have resulted from use in such work as pottery smoothing or flint chipping, definitive determination of the function of the implements is difficult. Various suggestions respecting their usage have been made by members of the Museum, one of which is that they may have served for stripping elm or other bark from trees for mat- or basket-making. Mr. William C. Orchard advanced the theory that they may have been employed in smoothing ridged seams in skin garments. Mr. Harrington deems it possible that they were complete wedges used in conjunction with round hardwood mauls for splitting wood, basing his supposition on the fact that numerous fragments of deer- and elk-antler wedges have been found at Indian village-sites in and near New York City. As none of those have been found intact, Mr. Harrington believes is probable that the antler, although a tough substance when used as a pressure implement for flaking, bark-stripping, etc., would fracture if struck a hard blow.

The late Alanson Skinner mentions finding "wedges of elk- and deer-horn with rounded butt and chisel-like edge . . . but none were found in good condition for illustration," in his



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report of the excavations of the Schley Avenue shellheap in New York City.<sup>1</sup> Mr. Arthur C. Parker records a similar object of antler, found on an ancient Erie village-site in Chautauqua county, New York,<sup>2</sup> which he classifies as a "small chisel-like implement," mentioning that "it is worn and polished and the cutting edge is sharp for such material."

These descriptions coincide with the appearance of the four implements herein described; but it would seem that the delicate unabraded ends and the slenderness of the antlers would preclude their use as wedges. At best, the suggestions respecting the possible employment of the tools are theoretical, and the chances are that unless similar objects are obtained from other sites, with more definite information concerning them, the specimens will remain in that vast catalogue of primitive American artifacts recorded merely as implements of unknown usage.

ARTHUR WOODWARD

<sup>1</sup> Exploration of Aboriginal Sites at Throgs Neck and Clasons Point, New York City, *Contr. Mus. Amer. Ind., Heye Fdn.*, vol. 4, no. 4, p. 60, New York, 1919.

<sup>2</sup> Archeological History of New York, Albany, 1920.

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### ANCIENT BUNDLES OF SNARES FROM NEVADA

DURING an archeological reconnoissance of the district about the town of Baker, White Pine county, Nevada, a small rockshelter on Baker creek attracted attention. Several test-holes made in the floor of the shelter for the purpose of gaining possible evidence of human occupancy were productive. For purposes of identification and record the site was named Sawmill rockshelter, from a ruined sawmill on the creek below.

One of the test-holes made between two large stones close to one side of the rear wall revealed a cache containing three bundles of snares, neatly bound, and a bundle of fibers which have been identified by Dr. Melvin R. Gilmore as those of dogbane or Indian hemp (*Apocynum cannabinum*), carefully folded back upon itself and bound with cord of the same material. One of the snare bundles was presented by the writer to the Museum of the American Indian, Heye Foundation. The other two, together with the bundle of fibers, are in the State collections at Reno, Nevada. The bundle of Indian hemp was no doubt the supply of fiber used by the owner of the cache in making the cord for the manufacture of snares.

Of the three snare bundles one was carefully

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opened for examination. One end of the bundle was badly decayed, and the short strings that were all at this end were either rotted entirely away or fell apart when touched. The length of the bundle was eight inches; the circumference at one end was ten inches and at the other nine and three-fourths inches; the central circumference was nine inches.

The outer wrapping of the bundle proved to be the long strings attached to each snare, the ends of which were carefully tucked in out of the way.

The body of the bundle, when unwrapped, was found to consist of straight slender sticks laid neatly together, with long cords and small wooden pegs arranged at one end. The sticks were bound together in pairs at each end, and each pair was provided with a small sharpened peg with the long string. There were sixty of these pairs, each pair evidently being a complete snare.

The ends farthest from the pegs had been in contact with some corrosive substance that had rotted the string attachments of most of the snares, but with the careful application of liquid celluloid to the decayed strings fourteen of the sixty were saved from further disintegration.

Each snare consists of two straight, slender, sticks, probably of greasewood, averaging six and a quarter inches in length (fig. 91, *a*), one end of

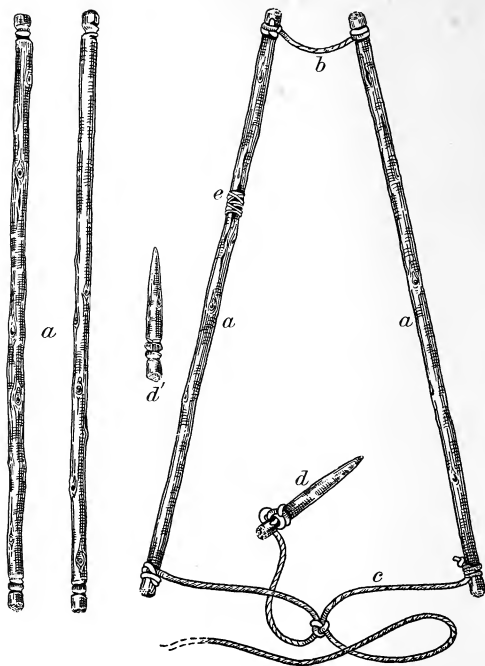


FIG. 91.—The notched sticks (*a*) of the snare (length, 6.25 in.), their cord fastenings (*b*, *c*), and peg (*d*, *d'*)

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each stick being bound to the other of the pair by a short string with a play between them of from a half to three-quarters of an inch (fig. 91, *b*).<sup>1</sup> The opposite ends of the sticks are similarly bound, except that the play between them when the string is fully extended is four and three-quarters inches (fig. 91, *c*).

Midway of this string a long cord is attached, its length varying from three and a half to four feet. Tied at one end of the cord is a sharpened wooden peg, averaging an inch long (fig. 91, *d, d'*). The distance from

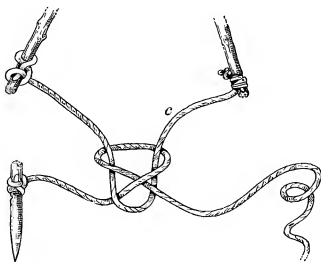


FIG. 92.—Weaver's knot

this peg to the point of attachment of its cord to the base string of the snare is about an inch.

<sup>1</sup> Kidder and Guernsey (Archeological Explorations in Northeastern Arizona, *Bull. 65, Bur. Amer. Ethnol.*, p. 187) list under their Basket-maker artifacts a stick with grooved end measuring six and seven-eighths inches long, and say, "In the American Museum collection from Grand Gulch are a number of sticks of this nature, tied together in pairs with strings which set into the grooves; we can hazard no guess as to their use."

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The rest of the peg cord hangs free, and with the other cords of the other snares composed the bundle wrapping. These long cords are fastened to the base cords of the snares by a "weaver's knot" or "sheet-bend" (fig. 92).

The sticks and pegs were notched to prevent the cords from slipping. The methods of fastening the cords to the sticks are shown in fig. 93. Two of the sticks in the bundle are reënforced at a weak point with sinew wrapping (fig. 91, *e*).

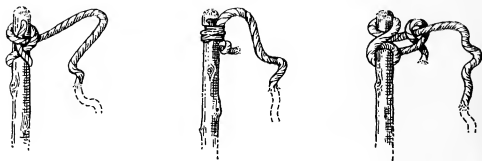


FIG. 93.—Methods of fastening

Most of the ends of the long strings, and also parts farther along, that were tucked into the bundle, had been in contact with the same corrosive substance spoken of before, thus accounting in some of the specimens for the shorter lengths than those which have not suffered such damage. The cords are made of fibers of Indian hemp (*Apocynum cannabinum*), as identified by Dr. Gilmore.

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The Great Basin region was never provided with an abundance of large game animals, hence the principal flesh food of the Indians of this area was derived from such rodents as rabbits, ground squirrels, and gophers, together with birds and lizards. From the size of the snares herein described it is more than probable that they were used for capturing such small game.

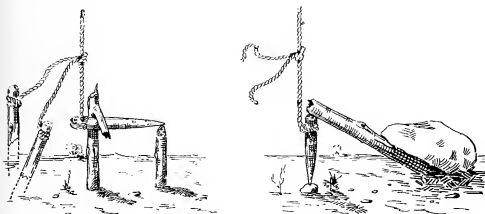


FIG. 94.—Conjectural trigger arrangement

It is not possible to say exactly how snares of this character were set, but it seems that the method of using them must have been on the principle of the figure-4, slip-noose, spring-trap, the only difference being the substitution of a pair of sticks for a noose. The two sticks may have been spread across the entrance of a rodent's burrow or set upright in a rabbit runway, a branch of a bush or a small sapling being bent down and

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the free end of the long string of the snare attached to its tip to form a spring. Doubtless the spring was held down by some kind of trigger, of which the peg formed a part (fig. 94). The action therefore would have been as follows:

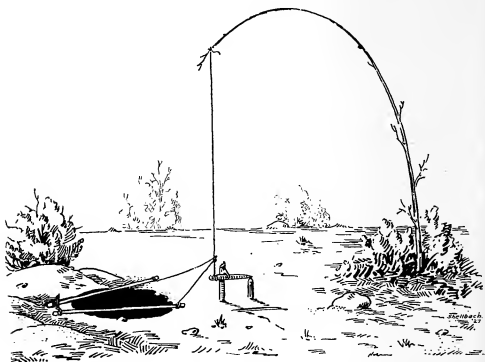


FIG. 95.—The snare set in place

Coming out of its burrow, the animal would attempt to shoulder aside the two sticks. In so doing it would dislodge the peg in the trigger, causing the release of the branch, which would spring upward, taking with it the animal held between the two sticks. The weight of the game



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and the smoothness of the sticks would cause it to slip toward the small end of the snare and be held helpless in the air. In order to present as graphically as possible the form and action of the trigger that may have been employed, fig. 95 is introduced.

The construction of such snares involved considerable patience and skill. Should the pairs of sticks of which they are partly composed bear any relation to those found in Grand Gulch, above referred to, they may pertain to the Basket-maker culture; but further excavation in the Sawmill rockshelter is necessary before more than a conjecture can be offered in regard to their origin and age.

Snares somewhat similar to those described were collected by Richard Wetherill in Grand Gulch, Utah, and are on display in the Museum's exhibit of Basket-maker artifacts. The pairs of sticks that form the parts of the snares are somewhat heavier, and the rigging and fastenings are of two-strand yucca-fiber cord. The small sharpened peg is absent, and the two sticks are brought together on the slip-noose principle. The long cord fastened to one end of the side stick is run through a small loop fixed to the end of the other side stick. The free end of the long string would be fastened down with a peg or tied to a bush, the

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two sticks spread over the opening of the animal's burrow or in a runway. In attempting to push its way through, the animal would pull the string taut and thus become firmly caught.

LOUIS SCHELLBACH, 3d

### RIVER DESERT INDIANS OF QUEBEC

BORDERING the Têtes de Boule on the southwest and south of the Barrière Indians are the four hundred members of the River Desert Band of Algonquin, calling themselves *Tèga'zi·bi·win·ín·iwag*, "Farm River People."

Their neighbors, the Têtes de Boule, are known to them as *Nopemiŋdažin·ínig*, "In the Bush People," or "Interior People;" the Grand Lake Indians are *Tcizá·giwiníni·wag*, "Big Outlet People;" the Barrière Lake Indians as *Mitcikónabikò·winín·iwag*, "Stone Weir People."

The River Desert Indians have lived in recent times on the head-waters of Gatineau river (*Tenagadenòzi·bi·*), Desert river, and Eagle river west to Coulonge river, going north at least to Lake Baskatong and possibly to Bark lake.

Since the withdrawal, about a century ago, of the assembled Algonquin populations from the mission at Lake of the Two Mountains, where they resided formerly as affiliates of the Iroquois

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of the Oka band, they have formed a separate group. During the period of contact there was considerable borrowing of Algonkian material culture by the Iroquois.<sup>1</sup> And in respect to the assimilation of Iroquoian characteristics by the Algonquin, we know that articles of Iroquois dress and ornament were acquired by the latter and are still preserved as heirlooms among them.<sup>2</sup>

The wampum practices of the Six Nations are recalled by the recognition of wampum beads as *mìgis·āk*, "shells," in contrast with the ordinary glass trade beads, *mandó·min·is·āk*, "spirit berries." An intensive study of the River Desert Indians will probably result in tracing other influences emanating from Iroquois sources.

The distortions to which the industrial arts of the River Desert Indians have been subjected during the last two centuries by their Iroquoian, Algonkian, and European contacts have left them in the *status quo* represented by the following notes on objects collected during a recent winter trip to their lands at the junction of Gatineau and Desert rivers near Maniwaki, Province of Quebec.

<sup>1</sup> I have dealt with one aspect of this question in the paper Algonkian Influence upon Iroquois Social Organization, *Amer. Anthr.*, vol. 25, no. 2, 1923.

<sup>2</sup> Black cloth skirts with ribbon appliqué borders, and silver brooches, silver wrist-bands, and large disc-brooches are to be seen as relics of former Iroquois proximity. See fig. 104.

The name *Maniwaki*, "Mary Land," denotes their fidelity to the Roman faith after the crisis at Lake of the Two Mountains mission, at the time resulting in the secession of the Mohawk converts to Protestantism.

Before listing the positive characteristics of the



FIG. 96.—Splint basket for vegetables.  
Diameter, 14 inches. (15/3029)

industrial life of the band, it should be noted that among the older informants there seems to be no remembrance of a porcupine-quill technique either upon the surface of leather or on

birch-bark. Nor is there good evidence that the weaving of basswood-fiber bags or mats existed among them, though the simple checker-weave in cedar-bark occurred in the manufacture of venison bags and floor mats. Ash-splints, however, seem to have come into rather extensive service in basket weaving, by simpler techniques, and incidentally in the making of floor coverings.



FIG. 97.—Basketry knife-sheath (*a*) and wooden spoon (*b*).  
Length of *a*, 8.25 inches; of *b*, 9.5 inches. (15/3078, 3072)

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Corn husk mats are still to be seen, possibly a reminiscence of their adjacency to the Iroquois. Basswood-fiber softened in water and boiled is also used in making lines and handles of pails (figs. 98, 99).

The splint-basket industry has a strong hold on



FIG. 98.—Birch-bark water bucket.  
Height, 13.25 inches.  
(15/3068)

the band (fig. 96). Such baskets are called *awədjónàgən*, "[something] carried on the back." This term applies to all forms, whether they are large carrying baskets or small receptacles not intended to be used on the back. They are made both

plain and fancy, rectangular and round, for farm and household use, and also as artistic and commercial products. The weaves are all fairly simple. By comparison with the handiwork of other Algonkian peoples they appear crude and

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coarse. The splint curly-cues appearing frequently in Algonkian basketry are suggestive at once of either Central Algonkian or Iroquoian forms. Baskets of identical form are made by the Iroquois at Lake of the Two Mountains. The River Desert Indians

apply to these ornaments of basketry the symbolic term *wápagwun*, "flowers." This carries out the symbolism of the floral motives appearing so extensively upon their original property in birch-bark work. There is evidently a



FIG. 99.—Opposite side of FIG. 98. Designs represent "frog's leggings," a medicinal plant, and leaves

sequence in the history of the weaving industry here, the initial stages of evolution beginning with the birch-bark baskets, then passing on to the weaving of cedar-bark (*kí-žik*) receptacles, then to elm-bark (*aní·b*), which the Indians

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(Pierre Djako, informant) think is the stronger fiber material, then finally to ash (*ágimok*), after experiencing economic influence from the Iroquois. The extension of ash-splint use to the making of a



FIG. 100.—Birch-bark box with flower design. Height, 9 inches. (15/3067)

hunting-knife sheath is shown in the unusual specimen (fig. 97, *a*).

A survey of other characteristics of economic life of the band shows snowshoes, snowshoe tools, and toboggans of the northern Ojibwa type, as



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well as the deer and moose-shank pack-straps, dog driving with built-up sled and shaft and collar harness, conical birch-bark wigwam frequently with the hoop encircling the poles on the inside, the wooden cradle-board, wooden spoons, stirring paddles, the use of moose and deerskin coats, leggings, breech-cloth, moccasins, and mittens of the same northern Ojibwa pattern (moccasins of the older pattern have round vamps, the latter forms



FIG. 101.—Birch-bark box and cover with lily designs, used for holding tea.

Height, 5.25 inches.

(15/3061)

have the cross-seam on the front, called "bull-nose"). Woven hare-skin blankets and garments are remembered, but are not now regu-

larly made. The bark canoe of this district has the fine lines and the pointed ends of the northern Ojibwa craft, while the extensive use of birch-



FIG. 102.—Birch-bark box with floral and star designs. Height, 12 inches.  
(15/3066)

bark for basket-making denotes affinity in the same direction. The baskets called *wigwemat*, "birch-bark container," are both decorated and plain, apparently in equal proportions, judging from specimens collected. Mats of corn-husk and cruder ones of

ash-splint for floor coverings are met with, while cedar-bark mats in checker-weave are remembered.

Decorative designs appear abundantly on birch-bark vessels, taking the form of animals and of

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trees and flowers (figs. 98-102). The designs of curved form on the specimen of water-pail (*kikwbenàgən*) shown in fig. 98 are called frog's leggings (*omakoki midàs*) and represent a medicinal plant. No porcupine-quill work, however, is known or remembered by people at the age of seventy. Little silk- or bead-work is done, the existing evidences of these arts being chiefly on moccasins and mittens. Chiefs' costumes, however, bear evidence of the former extended contact of the band with the Iroquois, in the man's feathered hat with beaded front-band (fig. 103), the ribbon and brooch decorated women's skirt, and the women's silver breast brooches and bracelets (fig. 104).



FIG. 103.—Man's feathered hat with beaded front-band

Social life exhibits the simplicity of the northern Ojibwa located beyond the line of totemistic distribution. The family group is the unit with its now dissolved hunting territory institution. Farming has so developed among them that prac-

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tically all are engaged in it. The band is now governed by three chiefs, elected for life, and three chiefs of secondary capacity.

Native dances are rarely performed. The drum (*tewèigwān*) is a hollow basswood log with a deer-skin head on each end, lashed with thongs, not hoops. The rattle (*cicéigwān*) is a cow's horn containing shot.



FIG. 104.—Woman's costume

Polygamy lurked among the older members of the more remote families of the band until several generations ago—one case of incestuous marriage with two daughters producing offspring was cited by an informant (chief Buck-shot), the person in question being *Wabimù-s*, "White Moose."

Evidence is fairly strong to show that the group now includes a number of families of the band which belonged to the districts south of the Ottawa, in Ontario. Some of the families bear

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names of the localities where they were born, to wit, Buckshot, from Buckshot lake; Chief Shabot, from Shabot lake. There are two families of Mohawk descent (one being that of Buckshot), a reminder of the affiliation of the two tribes at Lake of the Two Mountains.

The River Desert dialect is close to the idiom of the Têtes de Boule and the Grand Lake band. It shows no evidence, however, of the *r*, which historically is to be expected.

Native religious observances recorded show scapulimancy existing in close conformity with that of the Montagnais-Naskapi, and the placing of animal bones and parts about the camp for hunting talismans and out of respect for the spirits of the game.

The trickster-transformer is Wiskèdjak. Minor semi-supernatural beings are Pagà'k, Pàkwàdjè-winini, Misà-be, Mimiŋgwèsi, Barnàbi(?), and Windigo.

Totemism and sib-organization seem absent at this point, though the term *tótem* denotes an animal, a person "like a godfather," which appears at the time of a child's birth. In this may rest the rudiments of the paternal sib-organization arising in the social structure of the Ojibwa westward, but not apparently reaching eastward beyond the Temiskaming band. A collection of

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kinship terms shows close resemblance to the terminology of the Temiskaming and Timagami bands.

A glance at the ethnic status of the band creates the expression of its close identity with the Temiskaming, Timagami, Kipawa, and other bands grouped under the caption of eastern Ojibwa or Algonquin proper. The historical affinity of this whole group with the Wabanaki grows more convincing as the qualities of both peoples are better known, and, secondly, to go a step farther, the supposition of *consanguinity between the present Algonquin and the Ottawa proper*—evidently an emigrant body from the common parent stock—*is strengthened*.

FRANK G. SPECK

### ARAPAHO MEDICINE-MIRROR

FOR many years various Indian tribes have used white men's mirrors for signaling and for other utilitarian purposes, but so far as the writer knows there are few instances in which mirrors formed part of a medicine-bundle as in the case of a bundle obtained for the Museum from the Northern Arapaho in 1923. The procurable information in regard to it follows.

White-Haired-Old-Man, also known as Weasel-

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Bear, was one of the original owners of this medicine. At one time there were several such mirrors in the tribe, some painted black with yellow edges, others yellow with red edges, and still others in different designs.

In early days these mirrors were used in war expeditions for the purpose of bringing good-fortune to the owner in all his undertakings. This is symbolized by the light reflected by a moving mirror. As it is impossible to catch this light, so it was impossible for the enemy to capture or to injure the wearer of the medicine-mirror. The same power applied to sickness and to all other misfortune, for no evil could overcome an owner of the bundle, provided proper care was taken of it; thus happiness and longevity were insured to its owner.

When the bundle was opened for ceremonial purposes, a small piece of dogwood-root was chewed; then the finger-tips were pressed to the earth and the small amount of soil adhering to them was placed on the tongue and mixed with the root. The invocator then held his hands upward and together, the palms in front of him (fig. 105), and spat five times, first on the index-finger of the right hand (*b*), then on the right thumb (*a*), the left index-finger (*c*), the left thumb (*d*), and finally on the point where the hands were

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in contact (*e*). He next rubbed with his right hand, in an upward direction, his right leg, and his right arm with his left hand, then the left leg and left arm in the same relative manner, and lastly his face, chest, and body.

Next the bundle, which is contained in a quiver-like leather case, was untied, and again some dogwood-root was taken into the mouth, chewed, mixed with saliva, and spat on the bundle. The contents of one of the medicine-bags was then treated the same way as the dogwood-root and similarly expectorated.

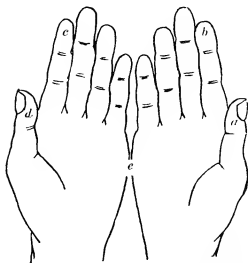


FIG. 105.—The points at which the medicine was spat on the hands.

When the bundle was untied, the wrappers were not handled directly by the owner, but were carefully pushed aside with the aid of small sticks until the contents were exposed. Once more the ceremony of blessing the hands and body with chewed dogwood-root mixed with earth was performed for the purpose of giving the owner power to dance for a long time or to run a great distance.



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The frame of the mirror, which measures  $9\frac{1}{2}$  by  $3\frac{1}{2}$  inches, is painted yellow on its front and back, and red on all of the edges, and is further embellished with brass-headed tacks as shown in the illustration (fig. 106). Yellow and red paint is smeared on the face of the mirror. The four-times four wavy lines carved and partly filled with yellow paint signify boring-worms which work their way through the hardest wood, and hence, although soft of body, possess great power of penetration. The three short lines at the upper left, which merge with those filled with the yellow paint, symbolize earthworms, which also are believed to have

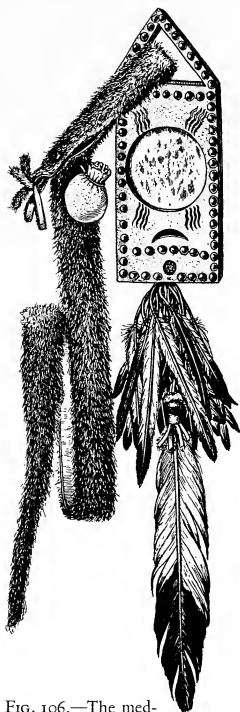


FIG. 106.—The medicine-mirror. Height of frame, 9.5 inches. (12/3063)

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great magic power. The carved crescent moon near the bottom of the frame is painted bright-blue and is represented because the moon watches over the world at night. At the bottom of the frame is an aperture into which has been forced a tiny medicine-bag or packet of deerskin, painted red.

Attached to the handle of the mirror is a bando-leer of otter-skin, to which is fastened a small bag of red earth-paint used in depicting the image of a human being on each palm and each sole of a participant in the Sun dance.

The feathers of the woodpecker, each attached to the frame with sinew and a deerskin thong, have a significance somewhat similar to that of the mirror itself, for woodpeckers are cunning and elusive, and difficult to capture.

The feather of the eagle, of course, represents that bird, cleanest and healthiest, and most cunning of all avian creatures. The feather is painted yellow.

Other objects forming parts of the bundle, but not attached to the mirror, are: (1) A ring of green-glass beads supplied with thongs for wearing about the neck; this typifies the sacred wheel, which in turn symbolizes the horizon. (2) A yellow-painted bead necklace (which should have the rattle of a rattlesnake attached), used to cap-

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ture the reptiles which it represents. When wearing this necklace the owner carried a long stick, asperged his hands with the root-medicine as before, rubbed the end of the stick with saliva, and pushed it into a little bag tied to the necklace, which contains certain medicinal herbs. This operation was believed to render the serpent harmless when it was touched with the end of this stick, so that it might be handled with impunity.

In later years the latter necklace and the mirror became exclusive Sun-dance medicines. Before the wearer put on the necklace he touched the earth with it, then blessed himself. The same performance was repeated with the mirror, which however was carried in the hand.

WILLIAM WILDSCHUT

### KAROK DANCE PARAPHERNALIA

IN NO other part of California did the Indians bedeck themselves with so much colorful regalia in performing their ceremonies as those of the northwestern part of the state included in the Karok-Yurok-Tolowa-Hupa group. Two major dances have there been recorded in which the costumes and the associated objects are unusually vivid and elaborate. These are known as the

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Jumping dance and the White Deerskin dance. Even today these dances are performed, though not so regularly as in former years; yet the regalia used by the most influential and wealthy men of the communities which practise the ceremonies are rich in primitive ornamentation and are highly valued by the owners. Through the generous gift of Mr. Harmon W. Hendricks the Museum recently obtained an unusually fine collection of dance costumes, obsidian blades, and dance wands, and also a perfect albino deerskin, all of prime importance to the Karok in the two dances mentioned.

As the writer intimated in a brief article on the Tolowa,<sup>1</sup> the northern Californians devote a large part of their lives to the accumulation of such articles as white deerskins, obsidian blades, dentalia, woodpecker-scalps and feather headbands, which in their small world are indicative of wealth.

In such ceremonies as the Jumping dance and the White Deerskin dance, although the primary motive is the renewal of the established world and invocation for bountiful crops and an abundance of fish and game, a strong secondary motive is that which enables the proud possessors of deer-

<sup>1</sup> Some Tolowa Specimens, *Indian Notes*, vol. iv, no. 2, April, 1927.

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skins, obsidian blades, etc., to display their wealth before an admiring populace, which display in turn reflects glory on the community to which the owner belongs.

The dances themselves are preceded by esoteric performances, including the recital of long formulas narrating the establishment of the dances by culture spirits, which are delivered at the places where the spirits are supposed to abide. These symbolic acts are performed by an old man and his assistant who must observe strict dietary regulations and undergo purification in the sweat-house. The dances are simple and continue from five to ten days, the costumes of the dancers becoming more and more elaborate with each succeeding day, until on the final day the climax is reached with every dancer wearing his choicest finery, each one striving to outdo his fellows.

Most of the articles in the newly-acquired collection, the major portion of which is now on exhibition, belong to the White Deerskin dance, in which rite most elaborate regalia is used.

Foremost among the specimens is a perfect albino deerskin, five feet in length from the tip of the tail to the end of the legs. The whiteness of the hair is relieved by vivid bands of woodpecker-scalps bound on each leg, a patch of the bands in each ear and eye, and a band stretching length-

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wise on the throat, while another tab of the brilliant feathers adorned with a fringe of deer-skin wrapped with bear-grass and tipped with feathers hangs pendent from the muzzle. Such albino skins are regarded as the most priceless of all Karok possessions. Sometimes several men own a skin jointly over a period of years, and in former times a perfect albino skin was valued at five hundred dollars. During the dance the skins are mounted on poles nine or ten feet long and are carried in the hands of the dancers, who form a long frontal line.

Dr. Kroeber, in his description of the Yurok Deerskin dance,<sup>2</sup> presents a clear picture of the appearance of the dancers, as follows:

"The Deerskin dancers wear aprons of civet cat<sup>[3]</sup> or a deer-hide blanket about the waist, masses of dentalium necklaces, and forehead bands of wolf fur that shade the eyes. From the head rises a stick on which are fastened two or four black and white eagle or condor feathers, so put together as to look like a single feather of enormous length, its quill covered with woodpecker

<sup>2</sup> Handbook of the Indians of California, *Bulletin* 78, B. A. E., pp. 55-56, Washington, 1925.

<sup>[3]</sup> The skins identified as those of the civet cat are in reality those of the American ring-tailed cat, in this case *Bassariscus astutus oregonus* from the region of Grant's Pass, Oregon.]

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FIG. 107.—Feather wands used in Karok Deerskin dance.  
(15/1932)

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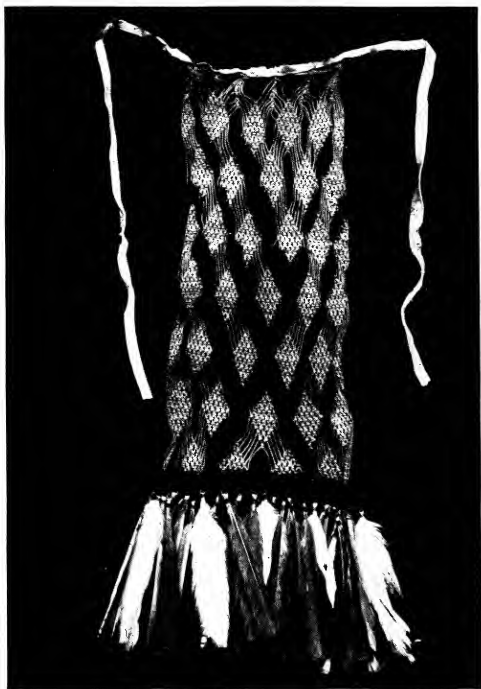


FIG. 108.—Network hair-ornament decorated with feathers.  
(15/1804)



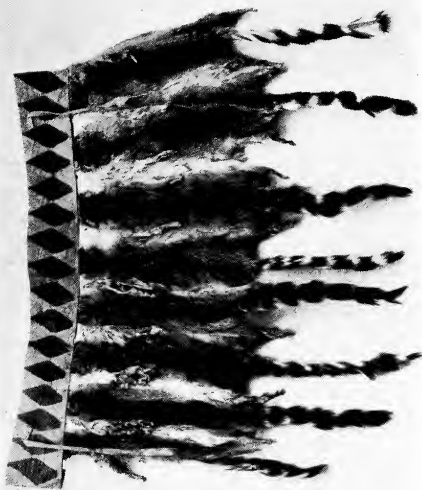


FIG. 109.—Skirt of ringtail cat skins attached to a broad band of deerskin, used by Karok dance leader. (15/1844)

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scalp; or, three slender rods of sinew,<sup>[4]</sup> scarlet with attached bits of scalp, rise from the stick [fig. 107]. The dancers also hold poles on which are white, light gray, black, or mottled deerskins,



FIG. 110.—Karok headdress of sea-lion teeth. (15/1802)

the heads stuffed, the ears, mouths, throats, and false tongues decorated with woodpecker scalps, the hide of the body and legs hanging loose. A slightly swaying row of these skins looks really

[<sup>4</sup> In modern times many of these sinew bases have been replaced with strands of baling wire.]



FIG. 111.—Karok netted hair-ornament decorated with feathers and with red and blue painted design. (15/1833)

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splendid. The singer in the center of the line, and his two assistants, add to the costume of the others a light net, reaching from the forehead to the middle of the shoulders and terminating in a fringe of feathers [fig. 108]. Their apron is always of civet-cat skins [fig. 109]. The step of the entire row is merely a short stamp with one foot. At each end of the line and in front of it is a dancer who carries an obsidian blade instead of a deer-skin. Over his wolf-fur forehead band is a strap from which project like hooks half a dozen or more curve-cut canine teeth of sea lions [fig. 110]. From the head hangs down a long, close-woven or crocheted net, painted in diamonds or triangles, and feather fringed [fig. 111]."

"A double deerskin blanket passes over one shoulder and covers a part of the body; or is replaced by an apron of civet or raccoon skins. Under the left arm is a fur quiver. These two dancers advance and pass each other in front of the row of deerskins several times during each song, crouching, blowing a whistle, and holding their obsidians out conspicuously. In the final drama of the ceremony they may number four instead of two. All the dancers are painted with a few thin lines of soot across the cheeks or down the shoulders and arms; or the jaw is blackened, or the chin striped. The painting is quite variable

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according to the individual, and decorative, not symbolic."

Dr. Kroeber describes also the Jumping dance and the costumes worn:

"The Jumping dance varies between two steps, which are never changed while a song is in progress. In the first the hand holding a dancing basket is raised, then swung down and the knees bent until the fingers touch the ground, whereupon the dancer hops about

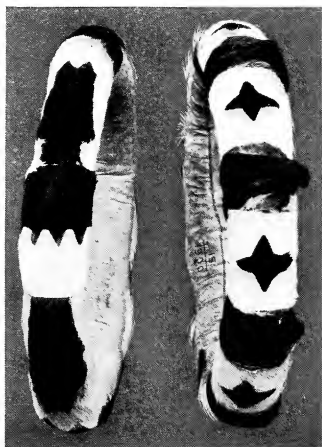


FIG. 112.—Karok dance head-rings of deerskin decorated with woodpecker-feathers. (15/1894, 1900)

half a foot into the air. In the second form of dance one foot is stamped violently as the basket descends. The drop or stamp coincides with

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FIG. 113.—Karok skirt of basketry weave, with seeds and glass beads. Length, 22 inches. (15/1880)

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the beat of the music; the leap itself is therefore begun at the end of a bar of song.

"The principal ornament worn in this dance is a buckskin band, tied over the forehead with the ends flapping. Its central portion is carefully covered with 50 large woodpecker scalps, and bordered with lines of other feathers and a strip of white fur from a deer belly. Before the dance reaches its height this band is often replaced by a stuffed head ring of skin, to which about five large woodpecker scalps are glued and sewed with sinew [fig. 112]. Either headdress is topped by a long white plume on a stick. From the neck hang masses of dentalium beads; about the hips is folded a double deerskin blanket, the fur side inward. In one hand is a cylindrical basket, slit along one side. This has no utilitarian prototype, nor do the Yurok put anything but grass stuffing into it or attach any symbolic association to it. This basket, *ego'or*, suggests in shape an enlarged native money box; but the Yurok do not see the resemblance. Face and body paint is slight, as in the deerskin dance.

"Not one of the ornaments worn or carried in either of the two ceremonies appears to have the least mythological or ritualistic significance. All the dress is standard, but by meaningless custom alone. Also, not a single one of the numerous

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ornaments is in use among any of the California tribes except the few adjacent to the Yurok who practice the identical ceremonies."

In addition to the dance paraphernalia described in the foregoing passages there are also two fine front aprons, one of which is shown in fig. 113. These garments are worn by Karok women in certain ceremonies, and although both show slight evidence of the white man's influence in the use of a few glass beads, they are otherwise entirely primitive. The aprons are fashioned from long deerskin fringes attached to wide bands of similar material. The thrums are ornamented with strands of white bear-grass, either wrapped about the thongs or plaited into basketry pendants. In addition to the grass, seeds of pine and juniper<sup>5</sup> are used profusely in the decoration of the skirts, and small cockle-shells also serve as beads to aid the ornamentation.

Other interesting dance objects in the collection are wands carried by young men and boys in the brush dance. Originally this ceremony was performed to effect the magical healing of a sick child, but it is now given to gratify the desires of the young men for a dance and general good time. The wands are fashioned from single sticks of

<sup>5</sup> As juniper does not occur in the Karok habitat, the seeds here used were evidently obtained by trade.



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wood, the more pretentious being ornamented with small blades of black and "mahogany" obsidian, and the entire heads of the pileated woodpecker. The wands carried by the younger boys are usually made entirely of wood, and aside from the woodpecker heads attached to them are of no intrinsic value.

ARTHUR WOODWARD

### SMOKING TIPI OF BUFFALO-BULL THE CREE

AMONG most of the Indian tribes of North America, smoke in one form or another was used ceremonially as an offering to the Powers that controlled the universe. No important undertaking was entered upon by the Prairie tribes of the Canadian Northwest without a council at which smoke from a pipe was offered to Manito, the Great Power, by all present. Almost every day, even after years of contact with the whites, the so-called pagans of the Prairie Cree offer smoke to the Powers of the four cardinal directions and of the zenith and nadir, invoking them to guard their people and to help them along the road of life. Among the most important ancient ceremonies still performed by these people is that held quadrennially in the "smoking tipi" erected to

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these Powers in fulfilment of a vow made when a member of the family was ill and had recovered, or for the purpose of invoking the Powers to guard some one who was absent on a dangerous mission.

During 1926 the writer obtained for the Museum



FIG. 114.—Smoking tipi of Buffalo-bull (right), showing fire-place and shrine. The son-in-law for whom the smoke was given is at the left.

the paraphernalia used in the smoking tipi of Buffalo-bull, an old Prairie Cree living on the Peepeekesis reserve in the File hills of Saskatchewan. Buffalo-bull had promised Manito that if his son-in-law (fig. 114), who had been wounded and gassed in France during the World War, re-

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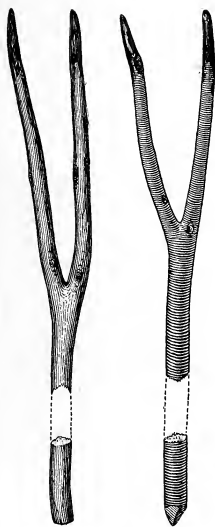


FIG. 115.—Blue and red sticks used for putting wood on the fire. Lengths, 5' 10'' and 4' 6''. (14/7951, A, B)



FIG. 116.—Painted sticks on which the smoking pipes are rested. Length, 11 inches. (14/7951, L)

covered, he would give the smoke. The young man's health improved, and arrangements were made to have the smoke late in the spring of 1926.

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The ceremony always takes place in a specially prepared tipi, the poles for which must be dedicated in the forest before they are cut. The first four poles to be used are painted with a red ring about six feet from the base; these are fastened together with a thong and raised in such manner that the base of each pole rests at a cardinal point. Forty more poles are leaned against the four, and a pinch of native tobacco and some sweetgrass are placed at the bottom of each as it is raised to position. In placing the poles no provision is made for a door, as the participants in the ceremony are supposed to enter by lifting the canvas cover. A round fireplace about three inches deep is cut out of the sod in the center of the tipi (fig. 114), and the dry wood to be burned is cut and placed inside during the day, as it must not be touched by human hands after the sun sets. When it is necessary to replenish the fire during the ceremony, a man appointed for the purpose picks up a piece of wood with two forked sticks (fig. 115), one painted blue, the other red, and places it on the embers. The shrine (fig. 117) is placed at the southwestern side of the tipi, on the branches of a green-leaved plant (as yet unidentified). A buffalo-skull represents the animals of the earth, and a small stone the underworld Powers. Small painted crooks with eagle-feathers

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attached (fig. 118) symbolize the birds of the air, and a digging-stick the roots taken from the ground. A pail containing water, which represents the waters of the earth, is hung from the center of the lodge. The two dominant colors painted on the objects used in the ceremony are



FIG. 117.—Shrine in the smoking tipi

symbolic, red typefying the glow of the fire, and blue the sky into which the sacred smoke rises.

Seven leading men take part in the ceremony. The giver of the smoke lifts the tipi-cover on the eastern side of the lodge as the sun is setting. He carries in his hand a stone, representing the earth, and other objects. As he steps inside he



FIG. 118.—Painted feathered crooks representing the birds on the shrine of the smoking tipi. Length, 22 and 25 inches.  
(14/7591)

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turns and prays to the Powers of the east, then walking around the tipi he stops at the painted pole representing the south and invokes the Powers of this direction, after which similar prayers are addressed to the west and the north. He then places sweetgrass on the fire and sits down to the right of the shrine.

Six men follow the host into the tipi, each carrying a smoking pipe, two forked sticks to rest it upon (fig. 116), and other sticks, painted according to individual taste (fig. 119), to represent his children, are laid carefully on the altar alongside the buffalo-skull after each man has prayed to the Powers. Before the pipe-smoking begins, everyone is purified in the smoke of sweetgrass. This is done by the host with a smoking braid of the grass fastened with a bark strip to the end of a long stick (fig. 120, *a*). The two sacred pipes, with stems painted blue and red (fig. 120, *b*), are purified in the incense, then filled with a mixture of Indian and trade tobacco. After a prayer is offered, they are lit by a guest appointed for the purpose with a long dry stick, one end of which is kept in the fire. Smoke is puffed to the Powers by the host, and the red-stemmed pipe is passed to the right, but is not allowed to pass between the fire and the shrine, and when the last man smokes, the pipe is passed back to the left until it reaches

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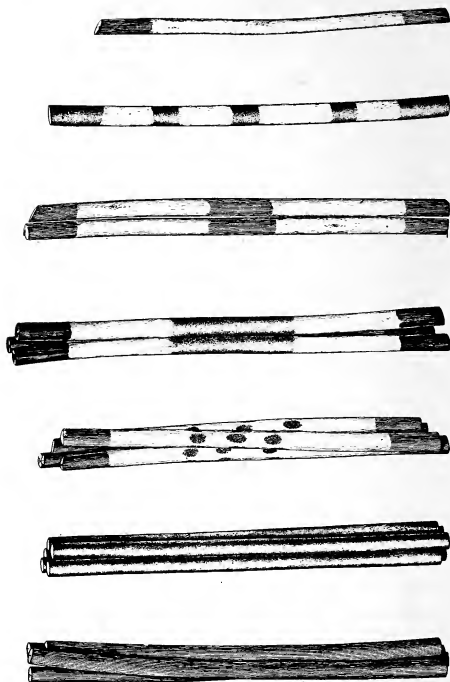


FIG. 119.—Painted sticks representing the children of the seven leading men who participate in the smoking ceremony. Length of the longest, 14 inches. (14/7951)



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FIG. 120.—*a*, Sweetgrass attached to a wand with a bark strip; length, 5' 3". *b*, Sacred pipe-stems; length, 22.5 inches. *c*, Painted fire-paddles; length, 32 inches. (14/7951)

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the host, who places it upon two forked sticks before the shrine. This procedure is repeated with the blue-stemmed pipe. Embers are lifted from the fire with a pair of wooden paddles (fig. 120, *c*), one painted red, the other blue; sweetgrass is placed upon them, each man purifies his own pipe, and the smoking is commenced.

To the accompaniment of a rattle, prayer-songs are chanted at intervals during the night, and from time to time the sacred pipes are lighted and passed around the circle. Food is passed into the tipi by women, and whoever is hungry partakes.

The smoking, praying, and singing continue all night with constant references to the host's object in giving the smoke. A very large quantity of tobacco is consumed, and at daybreak the host announces that he is satisfied that the Powers have heard their prayers.

The canvas tipi-cover is taken away after the ceremony, but the shrine and the offerings are left in place. It is believed that if these are disturbed by anyone without the permission of the giver of the smoke, he will suffer ill fortune. A story is told about a half-blood who used the sacred poles for firewood and that before a year had passed his house was destroyed by fire and two of his children died.

DONALD A. CADZOW

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### THE AGE OF THE NORSE BRONZE IMPLEMENT FROM CANADA

THE publication of "A Norse Bronze Implement from Canada" in *Indian Notes* for October, 1926, has given rise to considerable discussion and some criticism, the gist of which is that the implement in question belongs to a period at least a thousand years earlier than we had supposed, and that consequently its connection with the known Norse visits to America about the Tenth Century becomes very doubtful indeed.

For example, Dr. Gudmund Hatt, of the National Museum in Copenhagen, writes:

"The bronze palstaff (fig. 93) may very well be of Scandinavian origin, as far as can be seen from the picture. It is, however, very much older than 600-1000 A.D. It is decidedly of later Bronze Age type. If you would put B.C. instead of A.D. you might be right. The implement would have been quite as much of a curiosity in Lief Eriksson's day as in our own."

This opinion is supported by Mr. Louis C. G. Clarke, Curator of the University Museum of Archæology and Ethnology at Cambridge, England, who writes our Director:

"By the bye, I cannot agree with Dr. Kylberg's dating of what Harrington calls a 'palstaff' or

what we would call a socketed axe or celt. The palstave is shaped to fit into a split handle. The date 600-1000 A.D. is absolutely ridiculous, as the same type was used here and in Ireland 600 B.C. at least. Without seeing it, it is difficult to say exactly, but it is extraordinarily Irish looking. Could it have been brought over to America as waste metal in early days—as old metal pots were sent to West Africa, and so the campaign in Ashanti produced a number of fine bronze vessels dating from the XIV Century onwards, including the finest known late XIV Century with arms and emblem of Richard II now in the British Museum?"

When two such experienced students of European archeology agree on a point, it is time for a tyro like myself to retire. It certainly appears as if Mr. Kylberg were mistaken in his dates, or that I misunderstood him.

Mr. Clarke also criticizes my use of the word "palstaff," and in this he is technically correct. I had understood this word to cover metal celt-like implements so modified as to fit them for attachment to one end of a staff or pike. But Murray's *New English Dictionary* derives *palstave*, also *palstaff*, from Danish *paalstav*, Icelandic *pálstaf-r*, from *páll*, hoe or blade + *staf-r*, stave or staff, and defines it as "a form of celt of bronze or other metal, shaped so as to fit into a split

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handle, instead of having a socket into which the handle fits." This definition explicitly rules out our specimen from Canada, which is provided with such a socket.

The fact remains, however, that the bronze socketed celt of European origin was actually obtained by the writer as stated, and the mystery of its presence in the hands of a Cayuga Indian is now even deeper than before, especially since, according to Dr. Hatt, "the implement would have been quite as much of a curiosity in Lief Eriksson's day as in ours."

M. R. HARRINGTON

### RECENT ACCESSIONS BY GIFT

*From Mr. Charles F. Ballena:*

Grooved hammerstone; hammerstone; "turtle-back" chipped implement blank. Warner's Ranch, San Diego county, California.

Four arrowpoints; bone barb for fish-hook. Santa Cruz island, California.

*From Mr. Daniel Carter Beard:*

Sinew-back bow; skin quiver, decorated with beadwork and red cloth, containing a bow and six arrows. Apache.

Palm-wood bow; four arrows with iron points; arrow with blunt wooden point. Honduras.

Headdress of skins decorated with horns, feathers, brass ornaments, hair, etc.; scout headdress of fur decorated with feathers, a bone tube, elk-tooth, glass beads, etc. Crow, Montana.

Thirty-two fragments of animal bone. From rockshelter on grounds of the Forest Lake Club, Hawley, Pennsylvania.

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*From Mrs. Howard C. Benedict:*

Basket-shape pottery jar of black ware. Tewa, New Mexico.

*From Mr. Reginald Pelham Bolton:*

Flat, oval boat-stone with two perforations and serrated edge; arrowpoint. Slant, Virginia.

String of beads; small shell. Chattanooga, Tennessee.

*From Mr. A. M. Brooking:*

Two perforated clam-shells. Genoa, Nebraska.

*From Mr. William L. Calver:*

Four arrowpoints; stone scraper; bone awl; broken bone awl; one hundred potsherds and stone chips. From Hewitt rockshelter at Haskell, New Jersey.

Four potsherds. Greenville, New Jersey.

*From Mrs. Daniel Campbell:*

Two iron drills from the wampum-making machine at Campbell wampum factory, Pascack, New Jersey.

*From Mr. R. P. Conkling:*

Wooden flute decorated with bronze-work; cotton cloth poncho decorated with shell inlay. Chanchan, Peru.

*From Miss Edith M. Dabb:*

Woven double bag, woven cap, woven blanket, woven poncho, pair of woven mittens, felt hat, all toys for a doll; three dolls represented as wearing masks; toy llama, woven bag; woven cap for a child; basket; flute; toy jar, duck-shape, red ware; toy jar with two vertical loop handles, brown ware; toy jar with two vertical loop handles, white ware with brown painted decoration. Aymara Indians. La Paz, Bolivia.

*From Mrs. Paul G. Darrot:*

Three belts; two necklaces; three feather arm-bands; doll. Guarani Indians. Chaco, Paraguay.

*From Miss Lillian de Long:*

Beaded baby carrier; beaded moccasin. Sioux.

Sweet-grass basket. Chippewa.

Seven photographs.

*From Mrs. Harry J. Doulton:*

Four arrowpoints. Ellensburg, Washington.

*From Mrs. Goddard Du Bois:*

Thirty-nine field note-books containing miscellaneous data on the Diegueño and Luisieño Indians; twenty-four manuscripts on subjects dealing with the Diegueño and

## INDIAN NOTES

Luiseño Indians; two original musical scores for Luiseño songs; water-color of rock painting near Ballena, California; collection of letters from O. T. Mason and others to Miss Constance Goddard Du Bois concerning her field work in southern California.

*From Mrs. A. Durbin:*

Paddle with painted decoration. Haida, Alaska.

*From Miss Sally W. Farrar:*

Four Indian letters.

*From Mr. M. Harzberg:*

Four colored prints of Indian subjects.

*From Mrs. Thea Heye:*

Jar, with human face near base, buff ware with red, black, and white painted decoration. Nasca. Peru.

Beaded baby-carrier. Oglala Sioux. Pine Ridge reservation, South Dakota.

Silver bracelet with incised design representing an eagle. Haida, Alaska.

*From Mr. Louis Jonas:*

Plaster cast of the head of a Sioux Indian, made in Denver, 1923.

*From Mrs. P. Keppler:*

Album.

*From Mr. John Clapperton Kerr:*

Woven rawhide reins made by a Mexican of Ojai valley, California.

*From Mrs. John Clapperton Kerr:*

Bark box decorated with porcupine-quills. Chippewa. Parry sound, Ontario.

Hair rope made by a Mexican of Ojai valley, California.

This rope was made from the manes and tails of horses belonging to Mary C. Hunt.

*From Mr. Dudley Latham:*

Skeleton. Found at Seaman avenue and Riverside drive, New York City.

*From Mr. Merl La Voy:*

Twenty-six photographs of Eskimo.

*From Mr. J. Alden Loring:*

Pestle. Found half mile north of Susquehanna river, Tioga county, New York.

## INDIAN NOTES

*From Mrs. Edward B. Miller:*

Oval splint basket and cover with red and blue painted decoration; circular splint basket and cover with black stamped decoration. Minsi Delaware. Ulster county, New York.

*From Mr. Kenneth Miller:*

Seven negative films.

*From Mr. Clarence B. Moore:*

Silver ear-ornament with openwork design representing a star; silver ear-ornament with openwork design representing a sail-boat. Seminole, Florida.

*From Mr. Louis Schellbach, 3d:*

Club of elk-antler with end carved to represent an animal's head, handle perforated, incised decoration; club of elk-antler with two projections, handle perforated; fragment of oval haliotis-shell pendant; oval haliotis-shell pendant; twenty-four arrowpoints; fourteen bone dice for gambling; twelve turquoise pendants; ten fragments of turtle-shell; four bird and animal bones; four potsherds; small stone ball; seeds used for food; squash-seeds; mesquite-bean; pine-nuts; fragment of squash-rind; charred kernels of corn; charred corncobs; pair of cane dice, one of which bears black painted decoration; fragments of textiles; stone knife with wooden handle; fragments of charred coiled basketry; fragments of deerskin bag. Burial 1, Room 1, Mesa House ruin, Overton, Nevada.

Rectangular stone, grooved on one side; nineteen potsherds; two fragments of pottery smoother; fragment of unbaked clay fetish; small chipped knife-blade. Mesa House ruin, Overton, Nevada.

*From Mr. Ernest Schernikow:*

Modern pottery water bottle, glazed ware; cylindrical cup. Tonola, Jalisco, Mexico.

*From Dr. Carlos de la Torre:*

Bowl with double notched vertical ridged handles. From cave at Sierra de Nipe, region of Mayari, eastern Cuba.



# INDIAN NOTES

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MR. DONALD A. CADZOW has been designated to represent the Museum on the George Palmer Putnam expedition, which sailed on the *Morrissey* from Rye, New York, on June 11, for the purpose of making observations and procuring scientific data on the west coast of Baffin island. The schooner is in command of Capt. Robert Bartlett.

THROUGH information kindly supplied by Dr. A. L. Kroeber, of the University of California, it has been possible for the Museum to purchase three fine examples of the rare pottery made by the Yokuts Indians of Fresno county. These are the only Indians of northern California who have made pottery in late years, and the art with them is rapidly becoming extinct.

DURING a recent visit of the Director to Havana, Dr. Carlos de la Torre presented to him for the Museum a magnificent pottery bowl that was found in a cave at Sierra de Nipe in the region of Mayari, eastern Cuba.

RECENTLY added to the collections is a fine example of buffalo-robe from the Sioux, painted with a sunburst pattern.

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### A WAMPUM BELT IN HOLLAND.—

Through the courtesy of Mr. Jac. Hijink, of Rotterdam, a valued correspondent, the Museum has received a drawing which he has made of a wampum belt, probably of the Delaware Indians, in the Rijks Ethnografisch Museum at Leiden.

Unfortunately nothing of the history of the belt is known, except that it was purchased in 1883 from Ch. Jamrach. The belt is twenty-six inches long by two and four-fifths inches wide, and consists of eight rows of white and purple beads between nine strips of deer-skin, arranged in the pattern shown in fig. 121. Very many American Indian objects found their way to Europe in colonial times, largely as curiosities, and while some are now preserved in museums, doubtless most of them in time were cast aside as worthless and ultimately were lost. Many early artifacts, priceless to the student of American ethnology because they belong to a time before the Indians were



FIG. 121.—  
Wampum belt  
in Holland

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contaminated by white men, have found their way from Europe to the Museum of the American Indian, Heye Foundation, and form an important part of its collections illustrating the material culture of the Eastern tribes. The drawing kindly sent by Mr. Hijink is reproduced for the purpose of making it available for comparative studies.

Speaking of early ethnologic specimens, another wampum belt, or rather probably a part of one, twelve and one-fourth inches long and two and one-half to two and three-eighths inches wide, has been added recently to the already considerable collection of these interesting articles in the Museum. This specimen consists of ten rows of beads, with one hundred beads to each row, and is entirely of purple wampum with the exception of two pairs of white beads, each pair three beads apart, diagonally disposed across the width of the belt. This specimen is from Tadousac, Province of Quebec, and therefore presumably is of Montagnais origin.

THERE has been purchased recently by the Museum, in London, a rare Chippewa wooden pipe, twenty-three inches long. The pipe is of the well-known war-club shape of the tribe mentioned, and is covered with incised decoration representing an Indian encampment.

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THROUGH the generosity of Mr. Harmon W. Hendricks a large alabaster mask has been presented to the Museum. This specimen, from the Valley of Mexico, is six and three-quarters inches high and seven inches wide.

THE MUSEUM has purchased a diminutive polished steatite jar, only two and a quarter inches high, recently unearthed at Rose-dale, Long Island. The little vessel is exceptionally well finished and is ornamented below the rim and around the body



FIG. 122.—Steatite jar from Long Island. Height,  $2\frac{1}{4}$  in. (15/2830)

with two parallel incised bands, between which, in each case, is a circle of punctate dots, as shown in the illustration (fig. 122).

A VERY large box, finely carved and painted, has been obtained from the Haida. Accompanying this is a large wooden ladle, its bowl covered

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with fine carving, and the end of the handle fashioned to represent a raven's head.

A MONOLITHIC axe from Guadeloupe, French West Indies (fig. 123), was recently purchased in Paris. Not alone is the size unusual, but, as faintly represented in the illustration, it has a crudely carved head at the upper end, probably that of a bird. The implement is of very hard green stone. Monolithic axes and their distribution are the subject of a paper by Professor Saville published as vol. 11, no. 6, of *Contributions from the Museum* in 1916.



FIG. 123.—Monolithic axe from Guadeloupe, West Indies.  
Length, 15 in. (15/2837)

AN ADDITION to the popular literature of the ancient site known as Pueblo Grande de Nevada, hitherto described in these pages, is an article by Mr. M. R. Harrington, On the Trail of the First Pueblos, published in *The Outlook* of March 9.



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THE attention of the Museum has been kindly called by Dr. C. Hart Merriam of Washington to an error in the identification of the soaproot mentioned in Mr. Orchard's account of a Pomo headdress in the April issue of *Indian Notes* (page 173), in which the plant is recorded as *Yucca glauca* instead of *Chlorogalum pomeridianum*, no species of *Yucca* occurring in middle or northern California. Dr. Merriam mentions also that William Benson, noted in the same article (page 171) as having made the beautiful headdress described and illustrated, is a member of the Kulanapo division of the Pomo, whose territory was Big valley on the south side of the main part of Clear lake.

In another communication Dr. Merriam directs attention to the statement on pages 141-142 of the same issue of *Indian Notes* respecting the use of juniper-seeds in decorating the Tolowa apron described and illustrated, saying that "junipers do not grow anywhere in northwestern California," and that most of the aprons examined by him "have strings of sugar pine nuts more or less mixt with shells." Dr. Merriam's comment was referred to Dr. M. R. Gilmore, who reports as follows:

"I have made careful examination with comparative material of known identification and I find the seeds in question to be specifically *Juniperus*

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*occidentalis*. The seeds of this species are naturally brown in color, but the beads have evidently been dyed black. A peculiar pitting of the seed is a specific character of this species.

"To account for their presence in the region from which they were collected I can say that the range of this species of *Juniperus* is not too distant to prevent the direct importation of the seeds by the people in whose possession the said beads were found. By indirect importation I have known several instances of transportation of material to a much greater distance. For instance, I have found in Nebraska, South Dakota, and North Dakota abundance of seeds of a plant which is indigenous in Arizona. And it is a well-known fact that dentalium shells from the Pacific coast are a common article of intertribal commerce in the Northern Plains of the interior of the continent."

AN almost complete female skeleton, in a good state of preservation, from Mesa House ruin, Overton, Clark county, Nevada, collected by Louis Schellbach, 3d, has been presented by him to the Museum and is now a subject of study by Dr. Bruno Oettinger in the Section of Physical Anthropology.

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AT Teaneck, New Jersey, on April 30, Dr. Melvin R. Gilmore addressed the residents on Indian Foods and Mr. Foster H. Saville on Indian Habitations, on the occasion of the Better Homes movement. Mr. F. W. Hodge recently addressed a joint meeting of the Washington Academy of Sciences and the Anthropological Society of Washington, at the Cosmos Club in Washington, on Some Zuñi Arts and Ceremonies, with motion-picture illustrations, and repeated the talk before the Friendship Council of the Park Avenue Baptist Church in New York.

GOW-SMITH'S LATEST EXPLORATIONS.—Mr. Francis Gow-Smith recently returned from Brazil, where he successfully conducted studies and gathered important ethnological collections for the Museum. Before Mr. Gow-Smith returned to civilization, word was received that he had been overcome by bandits, and for a time it was feared that his notes, photographs, and collections were beyond recovery; but most fortunately this fear was dispelled when he was able later to report the safety of himself and of his field materials.

This expedition was the most interesting of any that Mr. Gow-Smith has undertaken in Brazil. Tapirapoan, on the headwaters of Rio Sepotuba, marked the end of his river travel; from this point

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it was necessary to carry provisions overland through jungle, over mountains, and across lands covered sparsely with grass and stunted trees. This transportation was accomplished by pack oxen, sometimes very rebellious, and covered two-wheeled wagons drawn by ten oxen, with a Pareceis Indian as guide. Fifteen days' travel after leaving Tapirapoan he arrived at the Rio Sacre, where at one time a large Pareceis village stood on a site now used by a rubber-gatherer. Some beautiful falls are close by.

Most of the Pareceis Indians are living in Utiarity and São Joan. At the former place the Brazilian government maintains a school for Indian boys and girls, but this is now in decadence. The Indians live in shacks thatched with grass and palm-leaves. At São Joan a plantation is worked by the Indians with a Brazilian overseer. Mandioca, from which farinha, a flour, is made, is the chief product; this is supplied to employees of the telegraph line, many of whom are Pareceis Indians.

At Juruena Mr. Gow-Smith first saw the Nham-biquára Indians, although along the trail many signs of them were visible, especially their interesting hunting lodges, which are made by pulling the tops of saplings together and tying them with a *sipo* and sometimes piling more branches on top,

## INDIAN NOTES

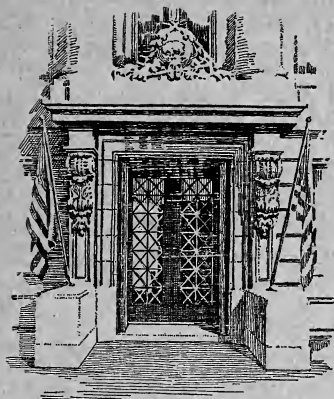
but leaving the front open. This serves as a poor shelter from the tropical rains. On cold nights the Indians lay near a fire built on each side of them. They are nomadic, each group remaining only a few days in each place. Seldom are they seen away from the trail, their departure therefrom usually being traceable only by their footprints, although one ever feels as if unseen eyes were watching every move he makes.

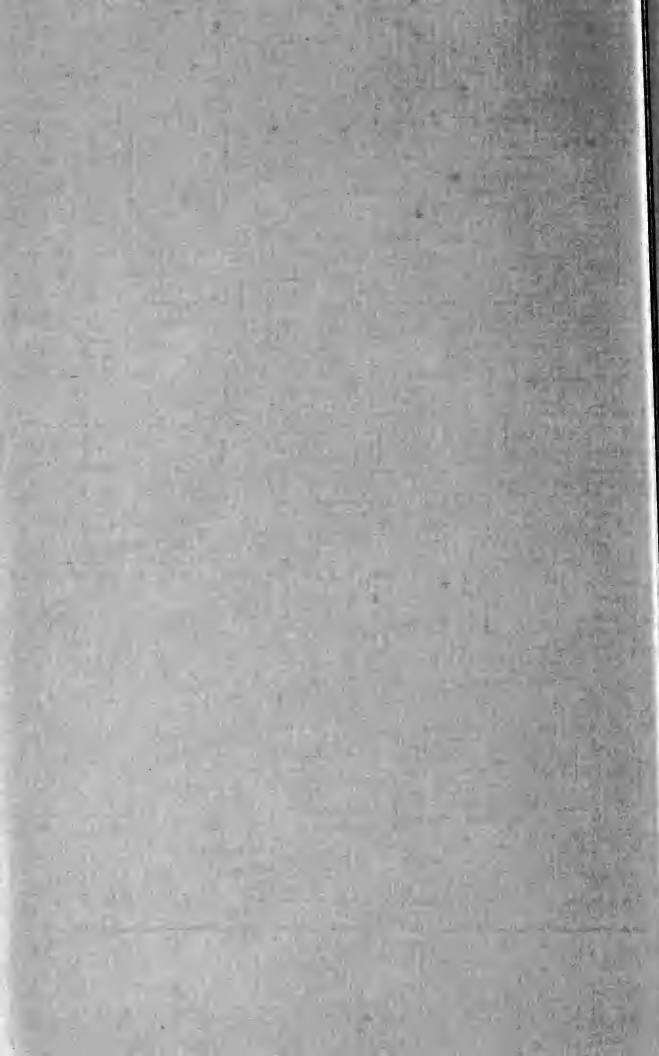
At Juruena Mr. Gow-Smith remained with the Nhambiquára long enough to enable him to make a collection representing the material culture of these "Children of the Jungle." They adorn themselves with necklaces made from seeds and monkey-teeth, and with beads worn around the abdomen; otherwise they go quite bare. Food is eaten raw, or nearly so, and nothing whatsoever of an edible nature escapes them. The women are timid, and very affectionate toward their children. Some of the men suffer from a scaly skin disease.

It was while returning to Tapirapoan that Mr. Gow-Smith was captured by a picturesque band of bandits posing as revolutionists. After three days of captivity he was allowed his freedom; so gathering his scattered collections at the first opportunity, he embarked in a dugout canoe and made his way down the river to civilization and

## *INDIAN NOTES*

home. The collections have reached the Museum safely after a very narrow escape from what may have been a total loss.







# INDIAN NOTES

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## ESKIMO CARVED IVORIES FROM NORTHERN LABRADOR

FIVE Eskimo ivory carvings have come into my hands within the last four years through contact with Montagnais-Naskapi and Algonquin Indians whose wanderings have led them to the northern coasts of the Labrador peninsula. They represent something of a new problem in the art history of the polar regions, in view of the fact that no other specimens quite like them seem to exist in the Eskimo collections of other museums. Coming from the northern Labrador coasts they seem to stand out either as a local development in the historical growth of Eskimo art or as the exclusive property of a division of the race which has long had the style among its properties though unobserved by students of the Eskimo. Changes in the scope and character of Eskimo art seem to have occurred

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in several regions, as pointed out by Jenness and Wissler, and even under the influence of Indian proximity (Boas), while the vitality of the esthetic urge and its development after contact with Europeans have been emphasized recently by Jenness in reference to the branches of the race in Alaska, Hudson bay, and northern Greenland.<sup>1</sup>

The first of these carvings (fig. 124) was brought out by François Vallée, a half-blood Naskapi of Seven Islands, south coast of the Labrador peninsula, who obtained it by trade in 1923 from the Ungava (Chimo) district, north Labrador. The second (fig. 125) was obtained in 1925 from another trader at Seven Islands, who had secured it by trade at Esquimaux point on the same coast. Finally, in 1927, from the wife of an Algonquin hunter, Joseph Otcig of the River Desert band, the three carved tusks (fig. 126) were bought, the northeast coast of Hudson bay being given as their source.

All of the carvings represent a fairly distinct type of art, while their workmanship is so similar that little doubt exists of their being part of a fairly uniform culture area extending across the north Labrador coast. They are all carved out of entire walrus tusks, with metal tools, as is shown

<sup>1</sup> D. Jenness, Eskimo Art, *Geographical Review*, vol. xii, no. 2, 1922.

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by file marks and drill holes. The animal figures represented are:

Fig. 124 (Ungava), walrus, seal, polar bear, sea-bird.

Fig. 125 (Ungava), narwhal, white whale, killer-whale.

Fig. 126 (Richmond Gulf district),  
*a*, domino, hunter shooting polar bear with gun, sea-bird, polar bear, salmon;  
*b*, narwhal, seal, walrus, salmon, polar bear, small mammal; *c*, narwhal, white whale, whale (?), seal, seal, salmon.

The peculiarity of the objects rests in the fact that they are all group carvings, the single animals not being cut apart as units. In this characteristic the sculptures stand apart from the usual animal carvings produced by Eskimo artists over a wide area, and even by the natives (Chukchee) of north-eastern Siberia. It might be thought that these carvings in block were not intended by their creators to form groups, but that they were obtained from their makers before they had cut them apart. As free figures in sculpture they would correspond with the work from these regions



FIG. 124.—Carved walrus-tusk, Ungava Eskimo. Length,  $9\frac{3}{4}$  in. (13/5088)



FIG. 125.—Carved tusk representing a narwhal, a white whale, and a killer-whale, Length,  $8\frac{5}{8}$  in. (14/3061)

generally regarded as typical in treatment. This is scarcely probable, owing to the fact that there are five of them from different sources, all in the same form, and especially that one of them (fig. 125) came through with the advice that the grouped killer-whale, narwhal, and white whale (beluga) represented the trio of hunters and victim—the white whale with its enemies which attack it from beneath (the killer-whale) and from above (the narwhal). The tusks are evidently complete units of artistic expression. One of the notable features to be observed is the frequency of the dot ornamentation appearing on seven of the animal figures and on the domino figure at the base of fig. 126, *a*. In describing the first of these carvings in a brief paper<sup>2</sup> I sug-

<sup>2</sup> Central Eskimo and Indian Dot Ornamentation, *Indian Notes*, vol. II, no. 3, 1925.



FIG. 126.—Carved tusks from the northeast coast of Hudson Bay.  
Length of *a*, 14.5 in. (15/3019-21)

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gested relationship between Eskimo and northern Indian art, since the dot motive was encountered in some profusion on bonework in particular among the Indians of Labrador peninsula. The ivory sculptures now described emphasize the point, since the proportion of dots in ornamentation is relatively high. The dotting occurs on all the narwhal figures, of which there are three in the collection, on one of the varieties of seal, of which there are two, and on the bird figures, of which there are two. Except for the domino figure previously referred to the dotting is absent from all the other representations. It would appear from this that the dottings are associated with body-markings on certain animals. Yet there always remains the possibility that the dots in central Eskimo art were primarily imitations of the dot markings on dominos which in recent times have become familiar objects among the Eskimo. The question, however, cannot be settled until an abundance of specimens and first-hand information are available. The occurrence of similarly disposed dot ornaments on other animal figures in Eskimo art from many regions, the same being true of north-eastern Siberia, and even occasionally in upper Paleolithic carvings, lends to the dotting process a complexion of antiquity that is worth consideration.

FRANK G. SPECK



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### SHAMAN'S CACHE FROM SOUTHERN CALIFORNIA

AN interesting cache of steatite tubes, with which also was a more or less crescentic steatite slab, has recently been acquired by the Museum.

In February, 1927, a washout occurred on the side of a road that traverses the farm of Rex

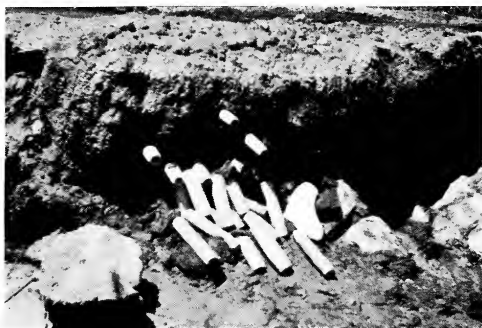


FIG. 127.—The cache of steatite tubes in place.

Detrick in the Incopah range of the San Jacinto mountains, at an elevation of approximately 4000 feet and about three miles southwest of Julian, San Diego county, California. In the area exposed by the washout, and between four and five

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FIG. 128.—Plain steatite tubes from the shaman's cache.  
Length, 4.5 to 6 in. (15/3337)

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FIG. 129.—Plain steatite tubes from the shaman's cache.  
Length, 6.25 to 9.5 in. (15/3337)

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FIG. 130.—Incised steatite tubes. Length of *d*,  $5\frac{1}{8}$  in. (15/3337)

## INDIAN NOTES

feet below the original surface of the ground, were found the twenty-one tubes, all resting in a horizontal position, and the slab.

A few months later some of the tubes were replaced in the position in which originally found and a photograph of them (fig. 127) made by Mr. Edward H. Davis, a collaborator of the Museum.

Ten of the tubes are quite plain; they are of gray steatite, and although smoothly finished, are not polished. The six shown in fig. 128, which are characteristic, range from  $4\frac{1}{2}$  in. to 6 in. in length and from  $1\frac{3}{8}$  in. to  $1\frac{7}{8}$  in. in maximum diameter. The perforations vary from  $1\frac{3}{16}$  in. to  $1\frac{5}{16}$  in. in diameter, and are round and smooth throughout, except that several of the openings are oval, appearing as if irregularly reamed.

Fig. 129 shows the remaining four plain tubes, the length of which is  $6\frac{1}{4}$  in. to  $9\frac{1}{2}$  in., while the slenderest is  $1\frac{5}{8}$  in. in diameter and the thickest  $2\frac{1}{8}$  in., and their perforations vary from  $1\frac{11}{16}$  in. to  $1\frac{15}{16}$  in. The material is the same gray steatite as all the others, with the exception of the largest one, which is brown.

Fig. 130, *d*, illustrates a tube,  $5\frac{1}{8}$  in. long, with a depression in one side as if made in the process of sharpening implements of bone or of other materials. Specimen *e* has a single narrow groove

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throughout its length, while *f* exhibits four short longitudinal grooves near one end, in two of which still adhere particles of asphaltum, suggesting



FIG. 131.—Steatite tubes each with a depression at one end.  
Length of the longest,  $7\frac{1}{8}$  in. (15/3337)

that the object had been ornamented with an inlay of shell in a manner rather common to various artifacts from the islands off the coast of California.

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The tube represented in *g* of fig. 130 has sixteen shallow longitudinal grooves at one end and also a deeper encircling groove, but none of these shows any indication of having been inlaid; indeed the grooves are too shallow to have borne such ornamentation.

The tube shown in *a* has a slight groove, three-quarters of an inch long, near one end, while that

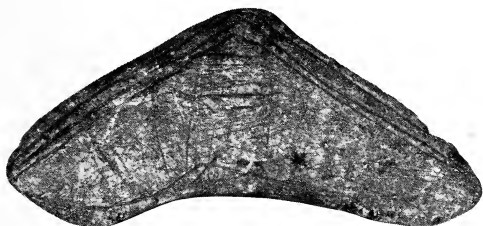


FIG. 132.—Gray steatite object with incised ornamentation.  
Length, 9.5 in. (15/3337)

illustrated in *b* is provided with a very narrow groove that almost encircles the tube near one end. A deeper groove surrounds the specimen shown in *c*.

Fig. 131 illustrates the remaining four tubes found in the cache. These are similar in form, each having a depression ground at one end which varies from three-fourths of an inch to  $1\frac{3}{8}$  in.

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wide. In the depression of two of these, particles of asphaltum still adhere, as if they were made for the purpose of decoration in the manner above mentioned. The longest of these four tubes is  $7\frac{1}{8}$  in.

The slab of light-gray steatite, referred to, is  $9\frac{1}{2}$  in. long and in shape is rudely crescentic (fig. 132). As shown in the illustration, the two straighter edges are decorated with three approximately parallel incised lines, while within the third edge, which forms a compound curve, is a single irregular incised line. Innumerable other lines are scratched on the surface of the slab, but in almost too haphazard a manner to have been designed for ornamentation. The other side of this object is also incised, but with only two lines near the straight edges and none along the curved side.

Similar stone tubes have often been found in the Diegueño country of southern California, and several very much larger than any of those now illustrated are in the collections of the Museum. Regarding artifacts of this kind, Kroeber<sup>1</sup> says:

"The shaman, *kwasiyai*, is said by the Diegueño to have been born as such. . . . Curing was effected by sucking blood or the disease object, either with the mouth or through a pipe."

<sup>1</sup> Handbook of the Indians of California, *Bull.* 78, *Bur. Amer. Ethnol.*, p. 718.



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Again (page 723): "Pipes, *mukwin*, were 6 or 8 inches long, tubular, and either of stone or of pottery. The former may be presumed to have been used in religion, the latter for every-day smoking."

In speaking of the girls' ceremony the same authority (page 716) says:

"The Diegueño use the *atulku*, a large crescentic stone, heated and placed between the girl's legs to soften the abdominal tissues and render motherhood easy and safe. These stones have been spoken of as sacred. No doubt they were. But their use was a practical one, in native opinion, not symbolical or esoteric."

From the above it may be deduced that the cache described consisted of some of the paraphernalia of a medicine-man used in healing rites, long since hidden away and revealed only by chance.

GEORGE G. HEYE

### TWO SPECIMENS FROM PORTO RICO

THE MUSEUM recently has acquired from Porto Rico two specimens of aboriginal handiwork so unusual as to deserve a measure of comment. One is a pottery vessel from a cave in the Barrio Carbones, township of Camuy, to the west of

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Arecibo in the northern part of the island. This is a region from which very few archeological remains have been reported. The second specimen is a curiously shaped stone of unknown provenience.

Pottery-making was a common domestic art among the pre-Spanish Borinqueños, but complete vessels are rarely found in archeological collections, because, with a present agricultural population of nearly 380 inhabitants to the square mile, nearly all the land is in cultivation, and the fragile handiwork of the ancient people has been broken by plowing. Fewer than fifty vessels, complete or restored, are known to the writer, and of these not a dozen have been illustrated in published reports.

Porto Rican pottery may be divided into three principal wares, distinguished by the clay, finish, and, to a lesser extent, by the decorative motives, while each ware has definite distribution and affinities. The largest group is a brown ware made of a coarse and porous clay with a large admixture of tempering material such as sand or shell. This ware, to which the bowl in fig. 133 belongs, has a general distribution throughout the island. A red-ware group is apparently made from the same clays as the brown ware, but has been covered with a red slip or has been dyed a

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FIG. 133.—Effigy bowl, Camuy, Porto Rico. Diameter, 4.25 in. (15/3138)

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brick red; characteristically, it is found on the south coast and at the western end of the island. Along the south coast, between Ponce and Mayaguez, certain shellheaps yield a buff ware with a smooth creamy slip. Finally, on the southern part of the western coast one finds a two- or three-color painted ware, which is best considered a sub-variety of the brown ware. The major divisions of Porto Rican ceramics are then:

1. Brown ware: found in all parts of the island.
2. Red ware: found chiefly in the west and south.
3. Buff ware: found chiefly in the south.

The three wares we have listed are separated one from another primarily by color and texture. On the same basis a further division may be made, because regional or even local styles are detectable within each ware. For instance, the brown ware of the south coast tends to be thick and coarse; the western brown ware is harder and thinner, and often it is marked by small crevices as if partially tempered with an inflammable material, such as bark; the north coast and mountain brown ware is intermediate in thickness and often has an uneven surface like the vessel in fig. 133.

The three major wares of Porto Rico are further distinguished from one another by their decorative

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FIG. 134.—Variants of molded bird motive. *a*, Palmarcojo; *b*, Punta Ostiones; *c*, Esperanza (Aguirre); *d*, Porto Rico.

(Courtesy of Peabody Museum, Harvard University)

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motives. In general decoration is achieved by modeling and incising, rarely by painted designs of simple character. Most Porto Rican vessels are effigy bowls or jars, to which animal or human character is given by a head, arms, legs, or wings in relief, while further details may be accentuated by incised lines. The vessel in fig. 133 falls in this class. At times also pots are decorated with incised designs of geometric appearance placed in encircling bands. As is the case with most New World pottery motives, these patterns on careful analysis usually disclose a zoöomorphic origin.

The bowl under discussion evidently is an effigy of a bird, perhaps a pelican, for a long projecting bird-like tail is its most obvious characteristic; on either side are incised arcs indicating the wings, while opposite the tail is a small head marked by a long bill, an eye, and a crest. Flanking the head are a pair of arms or legs, which suggest that this particular bird either is conventionalized to the point where the legs have been displaced from their natural position or else that we have some monstrous mythological type such as the *Moan* bird of the Maya.

The bird motive seen on this bowl is not unique, for it appears frequently on pottery from the west-coast shellheaps and occasionally on south-coast

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vessels; but it usually occurs not on brown ware, as in this instance, but on red ware. In fig. 134 we give examples of a few of the variations this motive underwent in the hands of Porto Rican potters. In *a* a more or less complete if conventionalized figure of the bird is shown, while the other specimens illustrate conventionalization to simplified forms. The series of modifications in reality is much more complex than here suggested, for it runs through several types of changes and it blends with other animal motives. This is only one of several complicated bird motives from Porto Rico.

On the cultural bearing of Porto Rican ceramic types we can here say but little. Of the primitive Ciboney culture discovered by the Museum in Cuba<sup>1</sup> there is little trace in Porto Rico. Buff ware from the south coast shows extremely close affiliation with ceramic remains from Haiti, Jamaica, and Cuba, from which it may be plausibly argued that it is the product of the Tainan or Arawak group, the first migratory wave from South America. Red ware, while in part exhibiting distinctive local decorative motives, on the whole shows affinity with the Lesser Antilles. We therefore judge that most red ware is of Carib

<sup>1</sup> See M. R. Harrington, *Cuba before Columbus, Indian Notes and Monographs*, New York, 1921, pp. 383-427.

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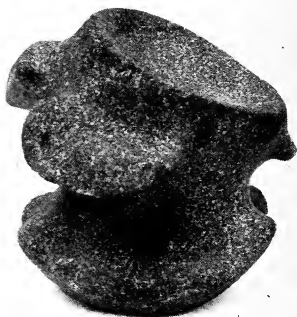


FIG. 135.—Problematical stone object from Porto Rico.  
Height, 3.75 in. (15/3137)



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workmanship or at least reflects Carib influence. Brown ware includes the pottery with the strongest local flavor and is the most widespread type. Stratigraphical examination of a shellheap (Punta Ostiones) by the writer in 1916 showed that brown-ware fragments appeared in greatest numbers in the oldest refuse. Hence we believe that brown ware was at first made only by Tainans, but, as shown by the incorporation of Carib motives, it may have been manufactured by the Carib or by their captured Tainan wives. The combination of red-ware decoration and brown-ware clay seen in fig. 133 is best explained by this hypothesis.

Porto Rican archeology has produced numerous stone objects of unascertained function. Among these we may list several definite types, which, from their shapes, are fancifully known as "collars," "elbow stones," "three-pointed stones," and "masks." To this list the specimen shown in fig. 135 is an addition. At first glance it appears to be a bird-effigy mortar. However, the curved rocking-chair base would make it very difficult to perform effectively any operation on the curved upper surface; hence it must be regarded as ceremonial rather than utilitarian.

Apart from the curved base this specimen recalls the stone stools of southern Central America manufactured by Chorotegan and Chibchan tribes

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such as the Orotiña and Guetar. It is a well-known fact that many thousands of Indian slaves from this region were sold in other parts of Latin America, principally under the administration of Pedrarias Dávila, at the period when the Spaniards found it necessary to replace the native population which they had killed off in the Antilles. Certain stools or metates found in Porto Rico are approximately of Chorotegan type and apparently were cut with metal tools, which suggests that they might have been manufactured by slaves brought over from the mainland. On the other hand, the curious object under discussion, in spite of its quasi Central American shape, seems to be of unadulterated Tainan craftsmanship.

S. K. LOTHROP

### NOTES ON ARIKARA TRIBAL ORGANIZATION

IN late historic time the Arikara nation has been diminished very much and its ancient political, social, military, industrial, and religious organization is broken down and only vestiges remain. But so far as possible the vestigial units of the ancient tribal organization strive to serve approximately their ancient functions.

The Arikara nation formerly comprised twelve

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villages aggregating a population of several thousand persons. During all the centuries of the slow and gradual migration of this nation from their ancient habitat in the south to their ultimate location on the upper Missouri river these twelve villages maintained approximately the same relative positions in the area occupied at any given time by the nation.

Each village had its own political organization and government of its own local affairs, while grouped with the others for matters of greater concern. Thus the twelve villages were arranged into four groups, three villages in each group. In each group of three there was one village which was the leading village of its group. The village chiefs governed in matters of village affairs, the chief of the leading village of a group was the authority in matters of group action, while there was a principal chief of the nation charged with affairs of tribal import. The head chief was supported by a board of four associate chiefs. This organization of government under a head chief and four associate or assistant chiefs has significance not only from political wisdom, but also from mystical considerations. Observation of the Arikara polity in government and in religious activities, in ceremony and ritual, will show the prevalence of this numerical combination, a head-

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ship of one supported by a group of four associates. This is manifest so soon as one enters the tribal temple and beholds the sacred bundles hanging upon the wall back of the altar. Originally there were twelve sacred bundles, for each village possessed one. The sacred bundle of a village was its palladium, its sacred ark of the covenant, the mystic bond of unity of the village. The sacred bundles were in the keeping of custodians, or priests of its ritual, whose duty it was to guard the safety of these venerable objects, to perfect themselves in the rituals pertaining to them, and to teach these rituals to those who should become their successors in office, and to take the lead in the celebration of the religious festivals. The priesthood, or custodianship of the sacred bundles, was hereditary in certain families. When religious festivals were celebrated the keeper of the sacred bundle brought it into the sacred lodge, or temple. There it was opened upon the altar so that the holy objects contained in it were exposed to the reverent view of those who assisted by their presence and participation in the ceremonies of the festival. When a sacred bundle was opened on any occasion the people brought offerings and gifts which they deposited before the altar. Out of these gifts of the people the keepers of the sacred bundles took their fees for services and

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distributed the rest to the poor, the aged, the orphans, and the sick and needy.

It was said above that the dominance of the numerical grouping of one and four in all the symbolism of the Arikara is manifest so soon as one enters the tribal temple. The temple itself, and every Arikara dwelling house in old time likewise, was a single dome supported upon four main posts in the center and a circle of twelve shorter posts in an encompassing circle. It will be seen that the outer circle of posts in the temple is of the same number, twelve, as the number of villages federated in the constitution of the tribe or nation. And these twelve posts may be regarded as four groups, three in each group, in the four quarters of the circle of the sacred lodge or temple, corresponding to the all-embracing circle of the earth. Later it will be shown that in their assembly in the temple for any tribal affairs the representatives of the twelve villages were grouped correspondingly in four groups of three villages each in their seating in the lodge circle.

More obviously the numerical grouping by fours with a binding and dominating unit will be seen in the group of five large gourd rattles attached in a row on the top covering of every sacred bundle. These gourds were used in beating time for the singing of the hymns and chants of the

## INDIAN NOTES

ritualistic ceremonies, one for the chief priest of the occasion and one for each of his associates. And the chief priest and his four associates were symbolic of the higher powers whom they represented and whom they served. The Arikara considered the court of the higher mysterious powers to be one supreme being, God the Almighty, commonly called the Chief Above, together with his four assistants, his aids, doing his will in the four quarters of the earth. These four assistants of the Chief Above are the four quarters of the universe: namely, the Southeast, sacred to the Sunrise and to Vegetation; the Southwest, sacred to the Thunder the giver of the water of life, and to animal life on the ground, chief of which was the buffalo; the Northwest, sacred to the Wind or breath of life, and to birds and all life in the air; and the Northeast, sacred to Night the restorer, and to Mother Corn the mediator and dispenser of the gifts of the Chief Above.

The rituals of all these several sacred bundles of the different villages differed in detail but agreed in the essentials of form and of doctrine. The teachings of the sacred bundles bear on religious ideas, ethics and moral conduct, mercy, patience and forbearance toward fellowmen, the duty of parents to teach and train their children and to "set their young feet in the right path."

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Every sacred bundle contains among its hallowed objects a sacred pipe and tobacco, four perfect ears of sacred corn, and an ancient bone hoe. Every sacred bundle also has attached to it five ancient gourd rattles, as mentioned before. Some of the objects contained in the sacred bundles are the skins of certain species of birds and small mammals. Each of these various objects serves to call to mind some particular item in the volume of doctrine pertaining to the bundle.

As an example of the nature of the sacred bundles of the twelve villages a description of one may be given. We may take that of Hukáwirat. As we first view this venerable relic we see it as a bundle hanging upon the wall back of the sod altar in the sacred lodge or tribal temple. The bundle is about two cubits long, two spans wide, and one span thick. The bundle is wrapped in dressed buffalo-skin, tied with a thong of the same material. The thong is lashed round the bundle longitudinally twice at intervals of one-third of the width of the bundle, and twice transversely at intervals of one-third the length of the bundle, thus making four crossings of the thong on each side. On the top side we see five large gourd rattles attached to the binding of the bundle. Under the binding thong, on the outside of the bundle, there is inserted a short flat stick one

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cubit in length and one handbreadth wide, and shaped much like a Roman short sword. This object is made from some species of wood not yet identified, as they say it does not grow in the region now occupied by the Arikara, but is indigenous to a region formerly at some time occupied by the tribe while they still resided in the south. There is also attached to the outside of the bundle a sheaf of small sticks of peeled sandbar willow. These sticks, thirty-four in number and each one span in length, are used to lay out in a diagram to recite the beginning and development of the universe, what might be called the Arikara Book of Genesis.

The buffalo-skin wrapping, the binding thong, the object made of "mother-wood," and the sheaf of small sticks of sandbar willow, all are dark-brown from the smoke of many incensings which have been made during the uncounted years of the very long period of time through which the bundle has existed. Three braids of sweetgrass (*Savastana odorata*) and a plant of Arikara tobacco (*Nicotiana quadrivalvis*) are also attached to the bundle.

When the sacred bundle is taken down from the wall, laid upon the sod altar and opened, and its contents laid out in order, as they are during a sacred ceremony, we see the following objects:



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1. A meat-hook made of a hawk's talon attached to a stick of "mother wood" about one cubit in length and of the thickness of one finger.

2. A scalp attached to a piece of hoof. This is said to be a Kiowa scalp taken in battle about the year 1830. A braid of buffalo-hair is attached to the scalp, and it is fastened to a small round piece of hide, probably buffalo-hide.

3. A sparrowhawk skin with two small shell beads set in for eyes. A scalp is attached to the hawk-skin.

4. Four perfect ears of white flint corn.

5. Four white feathers. The species of bird to which they belong has not yet been identified; they may be of the swan, of the white crane, or of the snow goose.

6. The skin of a small species of hawk. Attached to the hawk-skin is a string tied to a small pouch of tobacco and a larger pouch of tobacco.

7. A larger hawk-skin.

8. One valve of a shell of the freshwater mussel. This is a dish to contain the consecrated tobacco from which the ceremonial pipe is filled in the Mother Corn ceremony.

9. Another small hawk-skin and a small pouch of tobacco.

10. The great sacred pipe. The bowl is made of catlinite and has a perforation through which

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a thong is passed to tie to the stem of the pipe to make it secure while passing about during the smoke offerings of the ceremonies. The ash-wood stem of the pipe is one cubit long. About a handbreadth from the mouthpiece of the pipe there is fastened a split quill, a piece of a scalp, a small shred of a red blanket, and a small shell like a snail-shell. The string which secures the bowl of the pipe to the stem is a deerskin thong on which is strung a copper or brass bead about two inches long with a Hudson Bay trade glass bead at each end.

11. A screech-owl skin wrapped with cord twined from the fiber of *Apocynum cannabinum*. A twig of "mother wood" is wrapped with the owl-skin because the owl is a forest dweller.

12. The skin of a small mammal, apparently that of a raccoon.

13. The dried skin of a ganoid fish, either a gar-pike or a small sturgeon.

14. A mole-skin stuffed with buffalo-hair.

15. The skin of a species of small owl of the woods with a small piece of "mother wood" wrapped with it by means of a piece of cord made of fibers of *Apocynum cannabinum*.

16. The skin of a burrow-owl. Although this species of owl lives in the burrows of prairiedogs and ground squirrels, it is the belief of the Arikara

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that its ancestors were tree-dwellers as other species of owls are, and that ancestral habits have been changed in adaptation to prairie conditions. For this reason a piece of "mother wood" is wrapped with this skin by means of twine made from fiber of *Apocynum cannabinum*, just as in the case of the skins of other species of owls, but in this case the cord is dyed red.

17. The skin of a bird, species unidentified, seeming to resemble a kingfisher.

18. One valve of the shell of a freshwater mussel. This was a dish to contain a medicine used in the "Consolation ceremony" made for the mourners after a death.

19. The skin of a Swainson's hawk.

20. Another Swainson's hawk skin with a small pouch for tobacco attached.

21. Last of all a small packet which is a miniature recapitulation of the complete bundle. This miniature bundle contains a perfect ear of white flint corn enclosed in the cardiac sac of a deer or some such animal. This sac while still moist had been drawn over the ear of corn and allowed to dry on so that it shrank and fitted closely like a glove on a finger, and is transparent so that the corn is clearly seen through it. Also there is a feather from each species of bird whose skin is contained in the complete bundle, a small piece

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of cord of *Apocynum cannabinum* fiber, a small twig of "mother wood," a whistle made from a wing-bone of an eagle, a bit of down, and a little pouch of medicine.

The use of this miniature bundle was in case of the close pursuit of the people by an enemy, or in some such emergency, when it was impracticable formally to open the complete sacred bundle. Then this miniature bundle, as representing the complete bundle, was opened. The whistle was sounded and some of the medicine from the small pouch was blown into the air. It was believed that this action caused a haze or fog to form which concealed the people so that the enemy was unable to follow or to find them.

The presence of a sacred bundle inspired in the people feelings of awe and reverence, but at the same time also engendered feelings of joy and confidence, hope and well-being, and sentiments of good will. On one occasion when a sacred bundle lay open before us on the altar the priest said, in bringing our minds to a proper attitude of contemplation: "We are here in the presence of a sacred bundle. All sacred bundles give good fortune to those who are privileged to see them, if such persons be in the right attitude of mind. It is your good fortune to be here and to see this bundle opened. And now you must be in that

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frame of mind which is befitting in the presence of this holy thing. It was our ancestors who placed all these things in this bundle according as they were directed. It was not a thing of their own invention, but they were obedient to divine instruction. Upon the man to whom it has been given to know the ritual there rests a heavy burden. He has undertaken a great responsibility. He must live blameless, giving no offense to anyone. He must be temperate and mild in his speech, never speaking harsh or hard words even under provocation. Every day he must do right in all things, and be always kind and hospitable. He must be gentle and forgiving and cherish no ill will against anyone even though such one may have done him injury."

As was said before, the Arikara tribe formerly comprised twelve villages. According to the consensus of information obtained from several persons considered to be well acquainted with the history of their tribe I learned that the twelve villages in old time were coördinated for all public functions in four groups of three villages each; that is, in the congregation of the people for the Mother Corn ceremonies, in council meetings, and other tribal gatherings for public functions, the people seated themselves in the holy lodge in the segments of the circle respec-

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tively allocated to the several village groups to which they belonged. These four groups were placed respectively in the four quarters of the circle of the holy lodge. In each group of three villages there was one village which was counted the first or leading village. The chief person in that village would be the leader of the group of three villages in any public functions.

The structure of the sacred lodge, likewise of the ordinary dwelling lodges, as was said before, was circular in ground-plan, with a domed roof supported upon four main posts about thirty feet high standing in a square, and around outside of this square a circle of twelve posts about ten feet high. The fireplace was in the center of the lodge, which would place it equidistant from each of the four main posts. Directly above the fireplace, in the center of the roof dome, was the wide, circular opening which served as skylight and ventilator.

The names of the twelve villages of the Arikara nation, and their grouping, were as follow: The four leading villages were Awáhu, Hukáwirat, Tukátuk', and Tukstánu. The two associate villages with Awáhu were Hokát' and Sciriháuh. Associated with Hukáwirat were Waríhka and Nakarík'. Tukátuk' was the leading village of the group including Tšínina'ták' and Wítauh.

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Associated under the leading of Tukstánu were Nakanústš and Nišap<sup>st</sup>.

Each one of these village names has significance and is related to some incident of the history of the village to which it pertains. The name of Awáhu signifies "Left behind"; Hokát', "Stake at the shore"; Sciriháuh, "Coyote fat"; Hukáwirat, "East"; Waríhka, "Horn-log"; Tukátuk', "Village at foot of the hill"; Tšinina'ták', "Ash woods"; Wítauh, "Long-hair people"; Tukstánu, "Sod-house village"; Nakanústš, "Small cherries"; Nišap<sup>st</sup>, "Broken arrow."

The group of three villages devoted to the south-east quarter was that led by Awáhu; that devoted to the southwest quarter was the one led by Hukáwirat; the group devoted to the northwest was that led by Tukátuk'. The fourth group, devoted to the northeast, was that led by Tukstánu.

In the congregation of the people for the Mother Corn ceremonies the representative women of the three villages which from time immemorial are allocated to the southeast quarter come in and seat themselves in a group just back of the southeast main post, the chief woman sitting close by the post and the others grouped fan-wise from that point as a focus. The men of the group assemble themselves, back of the women, between them and the wall.

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Likewise the representatives of each of the other three groups of villages place themselves back of the other three main posts of the quarters respectively allocated to their groups.

In the opening of a sacred bundle for the function of the ritual of the Mother Corn ceremony certain of the sacred objects contained in it are assigned for use in the ceremony to the chief woman of each of the four groups. Thus to the chief woman of the northeast quarter is assigned the ear of sacred corn, representing the spirit of Mother Corn, to whom, as was said before, the northeast quarter is dedicated.

The Arikara nation is the northernmost tribe of the Caddoan stock and its tendency of migration has been, through the course of many centuries, northward and northwestward. During probably at least the last five or six centuries, the way of migration of the Arikara has been upstream along the course of the Missouri river, culminating in the region of the northwest central part of what is now North Dakota. Thus their course of migration through many centuries has traversed the Great Plains from south to north, from the region of the Rio Grande to the upper Missouri. As the pioneers of agriculture in all the region of the Plains they brought the cultivated crops of corn, beans, squashes, and pumpkins into this



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region. All these crops were derived from the tropical regions of Mexico and Central America where, ages before, they had been first brought into cultivation and developed from their wild forms. These crops, and the methods of their cultivation, the Arikara introduced to the ruder tribes with which they came in contact in their northward movements, thus constituting themselves the missionaries of a better human culture and civilization.

In their successive settlements along their protracted line of advance, a line long-drawn in both time and space, the twelve villages were disposed in a certain order with relation to one another. The rearmost of the twelve was Awáhu, and from this fact it was named. The name signifies "Left behind."

Due to diseases introduced with the advent of the white race, and wars fomented in consequence of the disturbances caused by the white man's coming, the Arikara population has dwindled pitifully, especially in the last century. There is a tradition of the loss of one of the twelve villages by secession. It is said that the villagers of Wítauh once started away on some expedition and were thereafter forever lost from all knowledge of the tribe. It seems this village must have been displeased over some matters of the moment which

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had been decided against it in the national council. However that might be, after its occupants had proceeded several days' march from the vicinity of the home village they decided in village council that they would never return, but would go on and settle somewhere at a great distance from the other villages of their nation, cutting themselves off and determining to maintain their independence. The information of this action on the part of Wítauh was brought back to the tribe by two young men of the seceding village who had chosen to remain in adherence to the tribe rather than to take part in its disruption by secession. Therefore when their village made its decision they turned back from the expedition and returned home. The place where Wítauh was encamped at the time the decision was made was near a great hill in the western part of what is now North Dakota. The hill is now called Young Men's Butte from the incident of this action of the two young men.

So the sacred bundle of Wítauh was carried away in the secession of that village. It is said that with them the bundles of Nakanústš and Nišap<sup>st</sup> were also carried away, though how this could occur remains unexplained. However, these two bundles are also absent from the nation, being lost in that way or in some other manner. The bundle of Nakarík' is also lost.

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Seven of the original twelve sacred bundles still exist and are in the custody of certain members of the tribe. The other two missing bundles besides those carried away in the secession of Wítauli, were lost, perhaps by burial in the grave at the interment of their custodians for the reason that no one survived who was qualified to officiate in their rituals. Or if not buried in the grave they may have been for the same reason disposed of by being solemnly and ceremonially carried out to the crest of some remote and lonely hill and there sorrowfully and with pious prayers abandoned to the Chief Above for his disposal by the elements. Such disposition would be consistent with Arikara custom and belief. Since the sacred objects originally had been directly given, and their rituals divinely revealed by the Chief Above, it would be proper thus to resign them to his disposal, since no one remained who was instructed in their proper care.

The rituals of the sacred bundles one after another have been lost with the passage of time by reason of the death of those who were instructed, so that now there remains but one, that of Awáhu, which is still functional. The other six still in existence are now silent, and, excepting that of Hukáwirat have long been silent, no man living being instructed in their rituals. The

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sacred bundle of Hukáwirat remained functional until February, 1926, when it was silenced also by the death of Crow-ghost and Four-rings, the last two men surviving till that time who knew its ritual in completeness. The sacred bundle of Awáhu still may speak, for its custodian, Patrick Star, can recite all its ritual. Now unless someone learns all of this ritual from Star this bundle also, at his death, will fall silent like all the others. Then indeed will be gone forever from the earth the testimony of the belief and hope and wisdom of the seers and prophets of ancient time in the Arikara nation.

MELVIN R. GILMORE

### THE WORD "MAYA" AND THE FOURTH VOYAGE OF COLUMBUS

THE word "Maya" today is generally applied to certain natives of Yucatan, southern Mexico, and Guatemala, and to various dialects spoken by them. More specifically it is assigned to the inhabitants of the peninsula of Yucatan and to their dialect. It is therefore surprising to find that this word appeared in print in 1516, a year before the discovery of Yucatan, and that it was used to describe a native province on the north coast of Honduras.

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The first appearance in print of the word *Maya* is in the fourth chapter of the third decade of the *de orbe nouo Decades* of Peter Martyr, which was published at Alcalá de Henares in 1516. The passage in question describes the fourth voyage of Columbus, which took place in 1502-1503. It follows his route from Spain to Hispaniola, thence to Jamaica and the island of "Guanassa" (now Guanaja or Bonacca) off the northern coast of Honduras.<sup>1</sup> "Beeing heere instructed of a lande lying further towarde the south," runs the narrative, "he tooke his voyage thyther. Therefore little more than ten myles distant from thence, he found a large land, which the inhabitants called Quiriquetana, but he named it Ciamba. . . . In this great tracte, there are two regions, whereof the one is called Tuia and the other Maia."

Peter Martyr never visited the New World himself, yet as an authority he scarcely ranks below the actual eye-witnesses on account of his keen interest in the then newly discovered lands and

<sup>1</sup> The passage quoted is from the Lok translation (The Historie of the West-Indies . . . translated into English by M. Lok. Gent., London, n.d.). The original Latin text runs: "*De natura terrae alterioris ad occidentem didicit. Recta carpit iter ad occidentem. Ad milliaria decem paulo amplius tellurem reperit uastam nomine incelarum Quiriquetanam: ipse vero Ciambam nuncupauit . . . In magno illo tractu regiones sunt duae, Taia haec, Maia illa appellatae.*" Lok translates *ad occidentem* as "towards the South"—an obvious error.

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his intimate personal relations with many of the actual explorers, and also because his position on the Council of the Indies gave him ample access to state papers.

The eye-witness accounts of the fourth voyage of Columbus are (1) the letter of the Admiral



FIG. 136.—Map showing two provinces called Maya in the sixteenth century.

written to the Spanish sovereigns from Jamaica, (2) the letter of Diego de Porras, (3) the testament of Diego Mendez, (4) the "History" of Ferdinand Columbus, (5) the *Probanzas* of Diego Columbus, and (6) a letter written by Bartholomew Columbus. The first four sources men-

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tioned do not give the native name of the land first discovered. The Admiral himself, according to Peter Martyr<sup>2</sup> wrote another and more detailed account of his voyage, which is now lost, for he states that "Colonus, the firste finder of these regions, hath left in wryting" a description of the currents between Cape Gracias á Dios and "the Islande of Guanassa, the prouinces of Iaia, Maia, and Cerabaro." This description does not adequately cover the existing letter, but it may refer to the Commentary known to have been written by the Admiral and sent to the ruling Pontiff.

At all events the existence of a province of Maya on the north coast of Honduras is definitely established by the *Probanzas* of Diego Columbus, which consist of the testimony given in court when he contended his right to certain revenues from the lands discovered by his father.<sup>3</sup> One of the witnesses, Pedro de Ledesma, stated that he had been the pilot of the ship *Vizcaino* on the fourth voyage of Columbus, that they had stopped at the island of Guanaja where they had talked with a chief called *Imibe*, and that they had then

<sup>2</sup> Op. cit., dec. III, cap. VI.

<sup>3</sup> *Probanzas . . . contra . . . D. Diego Colon*. In Martin Fernández de Navarrete, *Colección de los viages y descubrimientos, que hicieron por mar los Españoles*, Madrid, 1829, vol. III, p. 556.

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sailed twelve leagues to a part of the mainland "called *tierra de Maya* in the tongue of the Indians." Furthermore, no fewer than twenty-two witnesses testified in answer to a set question "that the said Admiral, on the last voyage which he made, discovered a land called Maya, which was and is the point called Cajines." This is now known as Cape Honduras, and the Province of Maya can therefore be definitely assigned to the vicinity of the present town of Trujillo.

Another account of the fourth voyage of Columbus which mentions the province of Maya is preserved in the Magliabecchi Library in Florence. It was written by Bartholomew Columbus, the brother of the Admiral, when he was in Rome in the year 1505 or 1506. It describes the capture of a native canoe laden with merchandize off the island of Guanaja, an incident described by other historians. It adds that this canoe had come from "a certain province called Maïam or Yucatam."<sup>4</sup> This passage is doubtless the source of the assertion of later historians that the captured canoe came from Yucatan, which, they say, Columbus might well have discovered by following up the

<sup>4</sup> "Una cierta provincia chamata maïam vel iucatam." *Informatione di Bartolomeo Colombo della Navigatione di Poniente et Garbin de Beragua nel Mondo Novo*. This document has been printed by Harris in his *Bibliotheca Americana Vetustissima*, app., p. 473.



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information derived from the occupants of the canoe. But the Bartholomew Columbus letter was written in 1505 or 1506, and the word Yucatan, a Spanish corruption of a native phrase, did not come into use until 1517. This difficulty is solved by an examination of the manuscript which shows that the words *vel iucatam* were added in a later hand and are not part of the original script.<sup>5</sup> That a second province of Maya existed on the north coast of Yucatan we shall presently show, and the association of the word Maya with Yucatan would be due to somebody's failure to realize that there was another and much nearer province of Maya. The articles captured in the canoe by Columbus included metal and flint-edged swords, which were probably en route from Honduras to Yucatan, where neither flint nor metal is found.

Such then is the evidence that there once was a province called Maya on the north coast of Honduras. Let us now turn to the peninsula of Yucatan, where there also was a province of the same name. The expedition of De Solis and Pinzon in 1508 to "those lands called Chabaca and Pintigron" has been credited with the discovery of the peninsula. Harrisse, however, has

<sup>5</sup> See Brinton, *The Maya Chronicles*, Philadelphia, 1882, p. 10.

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assembled overwhelming proof that the course of these two famous pilots lay eastward and not westward from the island of Guanaja. In 1511 certain survivors from the ship of the *contador* Valdivia were made captives in that land, but the real credit of the discovery belongs to Francisco Hernández de Córdova, who in the year 1517 skirted the east and north coasts. In 1521 Peter Martyr wrote of this voyage: "Taking therefore provisions of victuals, they bēd their course directly to the West: and passing the provinces of Coma and Maia (so called of the borderers) they tooke only woodd and water for their voyage. . . . At length hauing sayled 110 leagues, they determaind to anchor in a prouince called Campechium, whose towne consisteth of 3000 houses."<sup>6</sup> Alonso de Santa Cruz, the cosmographer of Philip II, also wrote: "And navigating from that island [Cozumel] towards the west, they passed the provinces of Conmi and Mayan, and they came to another called Campechon where they found a town of almost three thousand houses."<sup>7</sup> These two passages clearly indicate that the Spaniards found a province called

<sup>6</sup> This passage first appeared in the third chapter of the Fourth Decade published at Basle in 1521 under the title *De Nuper sub D. Carolo repertis Insulis*.

<sup>7</sup> Alonso de Santa Cruz: *Islario general de todas las islas del mundo* . . . con un prólogo de D. Antonio Blázquez, Madrid, 1918, p. 514.

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Maya on the north coast of Yucatan, and it was thus shown on the Turin map of 1523.

The historian Cogolludo states<sup>8</sup> that the word Maya had formerly been applied to the entire peninsula during the period when the whole country was ruled by the Cocom family, whose capital was Mayapan (1201-1458). After the downfall and virtual extermination of the Cocomes, however, the peninsula was divided into numerous small principalities, which were known by the names of the lords who ruled them. When the Spaniards arrived, the name Maya was applied only to the territory near the once mighty city of Mayapan.

There remains for discussion yet another European contact with a province of Maya before the discovery of Yucatan. In the year 1511 a certain Valdivia set sail for Hispaniola from Darien with part of the treasure secured by Vasco Nuñez de Balboa. According to Gomara,<sup>9</sup> whose account is most generally accepted by other historians, the ship was wrecked on the reefs known as Las Vivoras (probably Pedro Cays) near Jamaica. Twenty men escaped in a small boat without sail or oars or food or water. For thirteen or fourteen days they were carried westward by the current

<sup>8</sup> Diego López de Cogolludo: *Historia de Yucatan*, Merida, 1867, vol. 1, p. 100.

<sup>9</sup> *Cronica de la Nueva-Espana*, cap. xii.

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until they reached "a province called Maia." Seven men had already died from their privations; Valdivia and four others were immediately sacrificed and eaten by the natives; the remainder were confined to be fattened for a like fate. However, they managed to escape, and fled for some distance until they came to the territory of Aquinquz (*Ab Kin Cutz*), lord of Xamançana, where they were made slaves. Francisco Hernández de Córdoba in 1517 heard rumors that some Spaniards were held in captivity in Yucatan. In 1519 Cortés learned that there were two survivors, one of whom, Gerónimo de Aguilar, he ransomed and from him learned the tale here related. The other, a sailor named Gonzalo Guerrero, had risen to the rank of war chief under Nachancan, lord of Chetumal, had tattoocd himself in native fashion, and had married "a prime lady of that land" by whom he had three children. In consequence he refused the deliverence offered by Cortés.<sup>10</sup>

<sup>10</sup> This romantic character, who was heartily hated by his compatriots, appears to have organized the Indian resistance to the Spaniards from the time of the attack on Grijalva at Champoton to the retreat of the little-known expedition of Alonso Dávila, the lieutenant of the *Adelantado* Montejo. He was finally killed in battle near the town of Chetumal after two decades of adventurous life in Yucatan. The present wildness and ferocity of the Indians of Santa Cruz de Bravo, Chunpom, Tulum, etc., on the east coast of Yucatan must be attributed not only to the cruelty with which they have been treated by their conquerors and rulers, but also to the inspiration furnished by Gonzalo Guerrero.

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Bernal Diaz<sup>11</sup> has a somewhat different version of Aguilar's story. Valdivia, he claims, was wrecked on the Alecranes, some reefs which lie north of Yucatan, to which the survivors drifted. The native chiefs divided up these unfortunates, some of whom were sacrificed while others became slaves. Aguilar was once destined for sacrifice, but managed to escape to the territory of another chief. "This," writes Bernal Diaz, "is the true story of Aguilar, and not the other which the historian Gomara has written."

The historian Sánchez de Aguilar has still another tale, that the surviving Spaniards were finally made slaves by Kinich, lord of Zama, a city identified as the ruins now called Tulum.

All the historians who have described this event have assumed that the "province called Maia" on which the shipwrecked men landed was on the east coast of Yucatan, with the exception of Bernal Diaz, who places the shipwreck on the Alecranes, whence a boat might well have drifted to the province of Maya on the north coast of Yucatan. Evidently the spot where Valdivia's vessel was lost and where he landed was not known with accuracy to his own contemporaries. Before discussing where he landed, I think we may assume

<sup>11</sup> The True History of New Spain, Maudsley transl., Hakluyt Society, London, 1908, book 1, chap. xxix.

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that the ship struck the shoals known as Las Vivoras near Jamaica, for the Alecranes are well off the route from Darien to Hispañola, even were the vessel to encircle the Caribbean, as was sometimes done on account of the strong current. Granted then that the wreck occurred near Jamaica, where would an unpropelled boat drift?

At first glance it would appear that an examination of the currents should solve this question. The general current sets to the west from Jamaica, and as Bernal Diaz records a case in which a woman from that island drifted in a canoe to Cozumel, it must be admitted that the east coast of Yucatan may have witnessed the landing of Valdivia. However, there is no "province called Maia" on this coast. A closer examination of the currents involved discloses the fact that near the coasts of Honduras and Yucatan there are counter currents of large volume, and these as well as the main current are considerably modified both by seasonal fluctuations and by storms. The writer has questioned men who know these waters well and finds that there is no uniform opinion as to where a boat would drift from Jamaica. But it was pointed out with varying emphasis by several that the usual type of storm encountered is known as a "norther," which generally lasts several days. If a boat were cast loose near

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Jamaica during such a storm, it might be driven far enough south to reach the coast of Honduras, where we have seen that there was a "province called Maia."

When the unfortunate survivors finally landed, some of them were sacrificed and eaten at once and the rest were confined in cages to be fattened. Las Cases<sup>12</sup> says that this statement slanders the Yucatecans, who did not practise such wholesale cannibalism. There exists no evidence to show in Yucatan that captives were ever fattened for eating like domesticated animals. This custom seems to have been primarily South American. It extended into Central America certainly as far north as Nicaragua.<sup>13</sup> It may well have extended to the north coast of Honduras, where dwelt tribes strongly influenced by South American forms of culture, if not of actual South American blood and speech. Again we are impelled toward the conclusion that Valdivia landed not in Yucatan but in the "province called Maia" in Honduras.

After the death of Valdivia, the survivors

<sup>12</sup> *Historia de las Indias*, 5 vols., Madrid, 1875-1876, lib. III, cap. cxvii.

<sup>13</sup> "*Tienen quince o veynte yndios e yndias atados engorgando para matar*," writes Castañeda of the natives east of Lake Nicaragua. *El Licenciado Francisco de Castañeda a S. M., sobre el estado en que encontro a Nicaragua*, etc., in M. M. de Peralta, *Costa Rica, Nicaragua y Panama en el siglo XVI*, Madrid, Paris, 1883, p. 49.

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escaped from their cages and fled for some distance till they came to Xamançana. Aguilar spent the rest of his captivity there, but Gonzálo Guerrero was sent to Chetumal some five leagues away. Thus the region to which they escaped was that of the frontier between Mexico and British Honduras, which cuts across Chetumal bay. The country through which they fled is usually described as *unos montes*, which means the "bush" or jungle. Now, Diego de Landa, the accuracy of whose descriptions is generally admitted, writes of Yucatan that it is a "land well cleared and stripped of evil plants and with many fine trees set out." Elsewhere de Landa states that the provinces of Cochua and Chetumal on the east coast were "the most populated and thickly settled" in Yucatan. How then could Aguilar have fled through the bush if he landed on the coast of Yucatan? Is it not probable that he escaped from a "province called Maia" in Honduras and fled through the jungles of British Honduras till he reached the well-cleared lands around Chetumal bay?

Whether Aguilar landed in Yucatan or Honduras, however, it seems clear that the aborigines gave the name Maya to two provinces and that Europeans came in contact with both at an early date. Neither has survived as a geographical



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name, though the word today has an ethnic, linguistic, and cultural significance. To the Yucatecan province of Maya the present word probably owes its origin, for, although the Chorti, a Maya dialect, extended into the Uloa valley and Maya archeological types have been found as far east as Tela on the north coast of Honduras, yet historical lines of contact and colonial development completely isolate the Maya of Honduras from the Maya race and the known remains of the Maya civilization.

S. K. LOTHROP

### STONE OBJECTS FROM NICOYA, COSTA RICA

A CHOICE collection of stone figurines and other objects from Nicoya, Costa Rica, has recently been presented to the Museum by Mrs. Thea Heye and Mr. Harmon W. Hendricks. Included in the group are three stone club-heads carved to represent heads of birds (fig. 137) and one an entire bird (fig. 138). According to Hartman,<sup>1</sup> who wrote twenty years ago, such ornamental club- or mace-heads were manufactured in only a restricted area on the Nicoya peninsula.

<sup>1</sup> C. V. Hartman, *Archæological Researches on the Pacific Coast of Costa Rica*, *Memoirs of the Carnegie Museum*, vol. III, no. 1, Pittsburgh, 1907.

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The specimen illustrated in fig. 137, *a*, is made of a brown conglomerate and carved to represent an owl. Although somewhat conventionalized, the large eyes, the short curved beak, the two head-tufts are readily recognizable as characteristic features of a horned owl. Fig. *b*, of gray sandstone seamed with quartz, also bears the distinguishing marks of an owl, with a little



FIG. 137.—Bird-effigy club-heads from Nicoya. Average height, 2 inches. (*a*, Owl, 15/1599; *b*, owl, 15/1600; *c*, parrot, 15/1601)

nearer approach to realism. The third specimen (*c*), likewise of gray sandstone, was evidently carved to represent a parrot, for instead of the eyes being placed close to the beak and well to the front of the head as in the case of the owl, they are represented by large circles on the side of the head. Moreover, the beak of a parrot is proportionately larger than that of an owl, a feature plainly indicated in the carving referred to.

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The three specimens have an average height of two inches, and each has been perforated for the evident purpose of accommodating a staff. To quote Hartman, "The highly ornamental, zoömorphie features of these implements and their size, which is in many cases too small to have admitted



FIG. 138.—Club-head representing a parrot, from Nicoya.  
Length,  $6\frac{5}{8}$  inches. (15/1602)

of their use for practical purposes, bear witness to their purely symbolical and ceremonial character."<sup>2</sup> Nevertheless, such an object with a suitable handle would certainly have been capable of delivering a death-dealing blow.

The fourth effigy of the group (fig. 138) represents an entire bird, and an almost identical

<sup>2</sup> Ibid., page 53.

## INDIAN NOTES

example is pictured by Hartman (pl. xxviii, 3). Our specimen, however, at some time perhaps not in the very distant past, met with an accident that resulted in the loss of the beak of the bird; then an attempt was made to smooth the fracture, but the break is still so evident as to afford little doubt that in its original state a beak was present and that the carving was intended to represent a parrot. The added line in the illustration suggests the probable outline of the missing beak. Although the parrot characters of the carving are highly conventional, the long tapering body, the eyes at the side of the head, and the restored beak are sufficient indications that a parrot effigy was intended. In size the eyes and the upturned wings are out of proportion to that of the body; but such proportions were often and in many ways ignored by the ancient artists. This specimen is much harder and more compact than the stones used in fashioning the small club-heads, and it once bore a high polish, but to some extent this has been dimmed by age and exposure. The effigy is six and five-eighths inches long, and when supplied with a wooden handle must have been a very effectual weapon.

The character of the perforation in each of the club-heads is such as to suggest that it was made with a hollow cylindrical drill of tough and

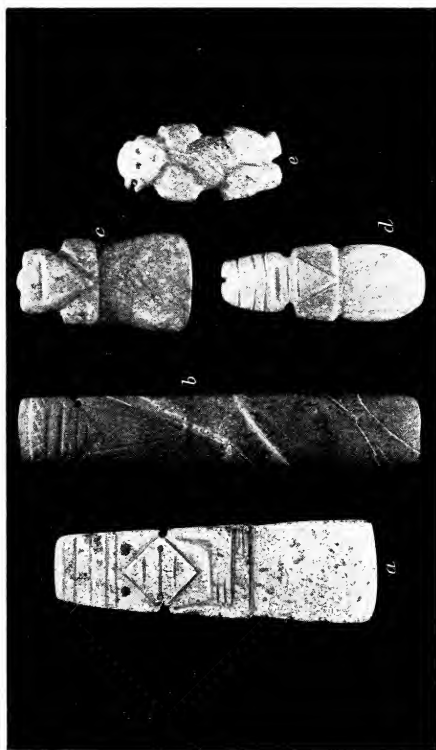


FIG. 139.—Amulets from Nicoya. Length, 2.25 inches (*e*) to  $5\frac{3}{8}$  inches (*b*). (*a*, 15/1621; *b*, 15/1633; *c*, 15/1623; *d*, 15/1626; *e*, 15/1644)

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hard cane, with wet sand as an abrasive. The tapering walls and a pronounced ridge toward the center of the perforations indicate that the drilling was effected from both ends.

A number of amulets of varying forms and kinds of stones are included in the collection. Figs. 139, 140 illustrate a few of these. Many of such objects found in Nicoya graves are more or less ornamented with carved designs representing human, animal, and other motives.

Five of these amulets, illustrated in fig. 139, show the adaption of the human figure as a motive. The form is easily traceable in *a*, in which the arms are folded across the body, the nose and chin are represented by a square standing on the apex of one of its angles, the mouth is indicated by a line with a shallow depression at each end, and the eyes are depicted in their proper position by two drillings. The lines appearing above the eyes are thought to represent a headdress.

Though somewhat eroded, the effigy illustrated in fig. 139, *e*, is more realistic, and shows the arms turned up over the chest. Figs. *b*, *c*, and *d* are more highly conventionalized, but the human motive is apparent.

Another illustration (fig. 140) presents amulets of another type, although *a* bears the characteristic angular face, with two depressions for eyes.

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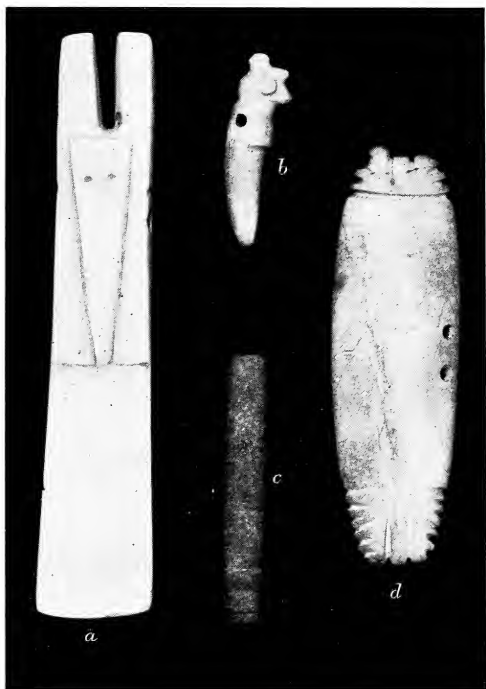


FIG. 140.—Amulets from Nicoya. Length, 2.5 inches (*b*) to 7.5 inches (*a*). (*a*, 15/1646; *b*, 15/1643; *c*, 15/1650; *d*, 15/1648)

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In *b* the amulet is drilled for suspension in a horizontal position. Fig. *c* represents a tube classified as a bead, while the carving of *d* suggests a bird motive.

The collection includes also a representative group of celts and other stone objects commonly found in the Nicoya region.

WILLIAM C. ORCHARD

### CHECK-LIST OF RECENT PUBLICATIONS ON MAYAN ARCHEOLOGY

THE ever-increasing interest in Mayan archeology is strikingly manifest in the considerable number of publications relating to the subject that have appeared during the last three or four years. Numerous expeditions have been at work in this important field, of which may be mentioned those of the Carnegie Institution of Washington, Peabody Museum of Harvard University, Tulane University, Museum of the American Indian, Heye Foundation, Archæological Society of Washington, and the British Museum. Reports of the activities of these institutions in the area of Maya culture have been published, and results of various studies relating to hieroglyphic inscriptions and calendar computations, as well as descriptions of antiquities from this region, have also been issued.



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Since much of this material is widely scattered, it seems opportune to furnish students and others interested in the progress of Mayan archeology a check-list of the contributions which have appeared since 1924, not including the results of ethnologic and linguistic studies; nor do we consider investigations of the Huasteca branch of the Maya people in the northern part of the State of Vera Cruz. In this list, also, it is not feasible to include the great number of newspaper accounts of field discoveries that have appeared in the United States, Great Britain, and Mexico, but it has been deemed advisable to incorporate the titles of a few noteworthy papers which have been read but not yet printed.

It is possible that, in preparing the list, which contains one hundred and eight titles, some publications have been overlooked, but we feel confident that the citations constitute a rather complete record.

BARDIN, JAMES C.

- 1926 Yucatan develops a truly American art.  
*Bulletin of the Pan American Union*, Washington, July, pp. 676-685, 8 ill.

BEYER, HERMANN

- 1925 Apuntes sobre el jeroglífico Maya Ek "Negro."  
*Anales del Museo Nacional de Arqueología*, Mexico, época 5ª, tomo 1, pp. 209-215, 38 ill.
- 1926 Apuntes sobre el geroglífico Maya Muluc.  
*Memoria y Revista de la Sociedad Científica*

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BEYER, HERMANN

- "Antonio Alzate," Mexico, tomo 45, núm. 1-6, pp. 141-146, 15 fig.  
 Las dos estelas Mayas de Chila, Chis. *El Mexico Antiguo*, Mexico, tomo III, núm. 10, pp. 236-250, 21 fig.  
 La inscripcion del dintel 30 de Yaxchilan. *Ibid.*, pp. 251-258, 9 fig.  
 1927 La cifre diez en el simbolismo Maya. *Revista Mexicana de Estudios Históricas*, Mexico, tomo 1, núm. 1, Enero y Febrero, pp. 3-7, 29 fig.  
 Dos fechas del palacio de Palenque. *Ibid.*, núm. 3, Mayo y Junio, pp. 107-114, 5 fig.  
 La cifra tres en el simbolismo Maya. *Mexican Folkways*, Mexico, vol. III, no. 1, pp. 24-30, 38 fig.

BLOM, FRANS

- 1924 Notes from the Maya area. *American Anthropologist*, Menasha, Wis., n. s., vol. 26, no. 3, July-Sept., pp. 403-413, 6 fig.  
 1926 Maya work of Tulane University. [Read at the meeting of the American Anthropological Association, Philadelphia, December. Not published.]

———. See RICKETSON, O. G., and BLOM

———, and LA FARGE, OLIVER

- 1925 Archæological and ethnographic expedition to Middle America. Department of Middle American Research. A preliminary report. The Tulane University of Louisiana, New Orleans. 11 pp., map. Reprinted from *Tulane News Bulletin*, vol. 6, no. 1, Oct.  
 1926-27 Tribes and temples. A record of the expedition to Middle America conducted by The Tulane University of Louisiana in 1925. Vol. 1, pp. 6, v, 238, maps i-iv, pl. i-vi, fig. 1-194, New Orleans, 1926. Vol. II, pp. 4, iv, 239-552, map v, pl. vii, fig. 195-374, New Orleans, 1927.

One of the most important contributions in recent years. A record of field work in

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- BLOM, FRANS, and LA FARGE, OLIVER  
the area of Maya influence in Vera Cruz, Tabasco, and Chiapas. The archeological studies were made by Blom, the ethnological and linguistic investigations are the work of La Farge.
- BUNKER, FRANK F.  
1927 The art of the Mayas revealed by excavations at the Temple of the Warriors, Chichen Itza, Yucatan. *Art and Archaeology*, Washington, vol. xxiii, no. 1, Jan., pp. 2-10, 6 ill., including 1 col. pl.
- BURKITT, ROBERT  
1924 A journey in northern Guatemala. *Museum Journal*, Philadelphia, June, pp. 115-144, 1 col. pl., 23 pl.
- CAIN, H. E. C. See METZGEN, M. S., and CAIN.
- CALLEGARI, GUIDO VALERIANO  
1925 Copan, la metropoli dei Maya. *Scienza per Tutti*, Rome, 15, vii, 2 pp., 6 fig.
- CONCESION  
1925 Concesion otorgada por el gobierno Mexicano a la Carnegie Institution of Washington para exploraciones arqueológicas en Chichen Itza, Yucatan. *Publicaciones de la Secretaria de Educación Pública, Departamento de Antropología*, Mexico, tomo iii, núm. 8, 10 pp.  
Decreto número 1376. *El Guatemalteco*, tomo cxi, núm. 13.  
The Guatemalan antiquity law.  
Contrato celebrado entre el Secretario de Estado en el Despacho de Educación Pública y Don James Roach, sobre exploraciones arqueológicas en el departamento del Petén; y acuerdo de aprobación. *Ibid.*, núm. 79.  
The Carnegie Uaxactun concession.
- CORLETT, DUDLEY S.  
1924 The art of the Mayas. *Art and Archaeology*, Washington, vol. xviii, no. 4, pp. 145-153, 9 ill.  
The photograph on page 145 illustrates five fraudulent pottery human figures fabricated in the city of Guatemala.

# INDIAN NOTES

- DIESELDORFF, E. P.  
1926 Kunst und Religion der Mayavölker im alten und heutigen Mittelamerika. Berlin. 45 pp., 239 ill. in text and in 53 pl.
- FERNANDEZ, MIGUEL ANGEL  
1925 El Templo de los Tigres Chichen Itza. *Ethnos*, Mexico, tercera época, tomo 1, núm. 1-2, pp. 35-42, 9 fig.  
El juego de pelota de Chichen-Itza, Yucatan. *Anales del Museo Nacional de Arqueología*, Mexico, época 5ª, tomo 1, pp. 363-372, 18 ill.
- GAMIO, MANUEL  
1926-27 Cultural evolution in Guatemala and its geographic and historical handicaps. *Art and Archaeology*, Washington, vol. xxii, no. 6, Dec., pp. 203-222, 29 ill.; vol. xxiii, no. 1, Jan., pp. 16-32, 33 ill.; no. 2, Feb., pp. 71-78, 11 ill.; no. 3, Mar., pp. 129-133, 6 ill.
- GANN, THOMAS  
1924 In an unknown land. New York. 263 pp., 59 pl.  
An account of a sea trip from Belize to Progreso, visiting various ruins, notably Tulum, on the coast of Yucatan. A description of visits to Chichen Itza and Uxmal.
- 1925 Mystery cities. Explorations and adventures in Lubaantun. New York. 252 pp., 52 pl.  
Maya jades. *Proceedings of the Twenty-first International Congress of Americanists*, Göttingen, 1924, pt. II, pp. 274-282, 12 ill.  
The problem of America's oldest civilization: Lubaantun. *Illustrated London News*, Oct. 3. 8 ills., restoration, and map.
- 1926 Ancient cities and modern tribes: Explorations and adventures in Maya lands. New York. 256 pp., 53 pl.  
A new Maya stela with initial series date. *Man*, London, vol. xxvi, p. 65.

# INDIAN NOTES

GORDON, GEORGE BYRON, *ed.*

1925 Examples of Maya pottery in the Museum and other collections. Published by the University Museum, Philadelphia. Portfolio of 100 collotype plates.

To be issued in four parts, of twenty-five plates each. Part I issued thus far. Several errors in captions should be corrected. The beautiful vase in pl. 1 and 11, from Chamá, Guatemala, designated as in the Cary collection, I have always understood was lost in the burning of the Windsor Hotel in New York many years ago. Pl. 111 and xvii-xviii, said to be respectively from Guatemala and British Honduras, and in the Bristol Museum, England, and pl. xxiv, labeled from British Honduras, and in the Liverpool Museum, are a part of the Davis-Gann collection, once on deposit in the Bristol Museum. The entire collection, however, was purchased about ten years ago for the Museum of the American Indian, Heye Foundation, and has been on exhibition in this Museum since its opening. They were found in a *chultun* at Yalloch, Department of Peten, Guatemala.

GUZMÁN, D. J.

1925 Interpretación de la escritura hierática de Centro America. Estudio sobre el sistema gráfico de la lengua Maya. *Boletín de la Academia Salvadoreña*, San Salvador, tomo 1, cuad. vi, 5 ills.

Arqueología Salvadoreña. Cerámica precolombina de "El Zapote." *Cosmos*, San Salvador, año 111, núm. 15, pp. 9-11.

HAMPTON, EDGAR LLOYD

1927 Rebirth of prehistoric American art. *Current History*, New York, vol. xxv, no. 5, Feb., pp. 625-634, 21 ill.

Relates to the application of Mayan and Mexican aboriginal architectural motives in the construction of a hotel and a yacht club near Los Angeles and San Diego, California.

# INDIAN NOTES

HARRY-HIRTZEL, J.-S.

- 1925 Collections d'antiquités Guatémaltèques du Musée d'Archéologie de l'Université de Gand. *Proceedings of the Twenty-first International Congress of Americanists*, Göthenborg, 1924, pt. II, pp. 668-672, 33 ill.
- 1927 Les antiquités précolombiennes des Musées Royaux du Cinquantenaire. Bruxelles. 14 pp.

HERRERA, MOISES

- 1925 Las representaciones zoomorfas en el arte antiguo Mexicano. *Publicaciones de la Secretaria de Educación Pública*, Mexico, tomo II, núm. 8, 22 pp., 37 figs.  
The representation of zoömorphice figures in Mayan architecture, sculpture, and painting is treated on pp. 17-18.

HEYE, GEORGE G.

- 1925 Eccentric chipped objects from British Honduras. *Indian Notes, Museum of the American Indian, Heye Foundation*, II, no. 2, Apr., pp. 99-102, 2 ill.

HOFFMAN, FREDERICK L.

- 1927 Mexico's pre-Columbian remains. *Bulletin of the Pan American Union*, Washington, April, pp. 343-352, 7 ills.  
On pp. 345-352 is an account of a recent visit to the ruins of Uxmal and Chichen Itza.

JAGER, GEORGE O.

- 1926 The "great cycle" glyph. [Read at the meeting of the American Anthropological Association, December. Not published.]

JOYCE, THOMAS ATHOL

- 1925 An example of cast gold-work discovered in Palenque by De Waldeck, now in the British Museum. *Proceedings of the Twenty-first International Congress of Americanists*, The Hague, 1924, pt. I, pp. 46-47, 2 ill., The Hague.  
The hieroglyphic stairway at Naranjo, Guatemala. *Ibid.*, pp. 297-304, 11 ill.

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JOYCE, THOMAS ATHOL

- 1926 Report on the investigations at Lubaantun, British Honduras, in 1926. *Journal of the Royal Anthropological Institute*, London, vol. lvi, July-Dec., pp. 207-230, pl. xvi-xxvi, 10 fig.
- 1927 Excavations at Lubaantun. *British Museum Quarterly*, London, vol. 1, no. 3.  
Maya and Mexican art. London, viii, 199 pp., 63 pl., 7 fig.  
An elaborately illustrated handbook.

JUDD, NEIL M.

- 1927 Middle-American expedition of the Archæological Society successful. *Art and Archaeology*, Washington, vol. xxi, no. 6, June, p. 299.

KREICHGAUER, DAM

- 1927 Anschluss der Maya-Chronologie an die Julianische. *Anthropos*, St. Gabriel-Mödling bei Vienna, Band xxii, Heft 1-2, pp. 1-15.

LA FARGE, OLIVER. See BLUM, FRANS, and LA FARGE.

LARDÉ, JORGE

- 1924 Arqueologia Cuzcatleca. Vestigios de una población pre-Máyica en el valle de San Salvador, C. A. Sepultados bajo una potente capa de productos volcánicos. Antigüedad del hombre en dicho valle. *Contribución al III Congreso Científico Panamericano*, San Salvador. 17 pp.
- 1926 Cronologia arqueológica de el Salvador. Vestigios de una civilización pre-Máyica en el valle de San Salvador Cuzcatlán, C. A., sepultada bajo una potente capa de productos volcánicos. Sucesion de las civilizaciones Indianas en esa region. *Revista de Etnología, Arqueología y Lingüística*, San Salvador, tomo 1, núm. 3-4, pp. 153-162.  
Indice provisional de los lugares del territorio Salvadoreño en donde se encuentran ruinas e otros objetos de interés arqueológico. (Apuntes de investigacion.) *Ibid.*, pp. 213-221.

## INDIAN NOTES

LONG, RICHARD C. E.

- 1924 A link between the earlier and later Maya chronologies. *Man*, London, vol. xxiv, no. 6, June, pp. 89-91.
- 1925 Some Maya time periods. *Proceedings of the Twenty-first International Congress of Americanists*, Göthenborg, 1924, pt. II, pp. 574-580.

LOTHROP, SAMUEL K.

- 1924 Tulum, an archæological study of the east coast of Yucatan. *Carnegie Institution of Washington, Publication no. 335*, vii, 179 pp.; 27, 182 fig.
- 1925 The Museum Central American expedition, 1924. *Indian Notes, Museum of the American Indian, Heye Foundation*, vol. II, no. 1, Jan., pp. 12-23, 6 fig.
- The expedition was designed chiefly as an investigation of the archæology of Salvador.

- Exodus and Iliad in ancient America. *The Independent*, Boston, vol. 114, pp. 39-44, 12 ills.
- 1926 Pottery of Costa Rica and Nicaragua. *Contributions from the Museum of the American Indian, Heye Foundation*, vol. VII, 529 pp., 205 pl., 290 fig.

Contains many important comparisons between the art of southern Central America and that of the Maya.

Stone sculptures from the Finca Arevalo, Guatemala. *Indian Notes, Museum of the American Indian, Heye Foundation*, vol. III, no. 3, July, pp. 147-171, 13 fig.

The architecture of the ancient Mayas. *Architectural Record*, vol. 57, no. 6, pp. 491-509, 24 ill.

Lista de sitios arqueológicos en El Salvador. (Ampliación a la lista provicional de lugares arqueológicos de El Salvador.) Elaborado y publicado por Jorge Lardé. *Revista de Etnología, Arqueología y Lingüística*, San Salvador, tomo 1, núm. 5, pp. 325-328.



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LOTHROP, SAMUEL K.

- 1927 The Museum Central American expedition, 1925-1926. *Indian Notes*, op. cit., vol. iv, no. 1, Jan., pp. 12-33, 2 pl., 9 fig.  
Pottery types and their sequence in El Salvador. *Indian Notes and Monographs, Museum of the American Indian, Heye Foundation*, vol. 1, no. 4, pp. 159-220, 25 fig.  
The word "Maya" and the fourth voyage of Columbus. *Indian Notes*, op. cit., vol. iv, no. 4, Oct.

LUNA, CARLOS

- 1925 Apuntes sobre arqueología nacional. *Sociedad de Geografía e Historia de Guatemala*, Guatemala, 19 pp., 3 ill.  
A study of the sculptured vase from Guatemala in the Museum of the American Indian, Heye Foundation, published by Saville in 1919.

MASON, GREGORY

- 1926 The shrines of a vanished race. *World's Work*, New York, Nov., pp. 75-89, map, 8 pl.  
On the eastern coast of Yucatan.  
1927 Silver cities of Yucatan with a preface by Dr. Herbert J. Spinden. New York and London, xviii, 340 pp., 33 pl.  
Rebuilding of America's sacred city. *Popular Mechanics Magazine*, New York, April, pp. 546-552, 8 ill.

MASON, J. ALDEN

- 1927 Native American jades. *Museum Journal*, Philadelphia, March, pp. 46-73, 5 pl., 2 fig.  
Illustrates and describes a number of Mayan jades.  
Mirrors of ancient America. *Ibid.*, June, pp. 201-209, 4 ill.  
Illustrates three of four mirrors of pyrite mosaic found in a grave in Kixpék, Guatemala, in the Ixil-Quiche area of Maya culture.

# INDIAN NOTES

## MAYA

- 1926 Maya architecture. *Bulletin of the Pan American Union*, Washington, August, pp. 770-778, 9 ill.
- METZGEN, M. S., and CAIN, H. E. C.  
1925 The handbook of British Honduras. London. Contains law on monuments and relics.
- MORLEY, SYLVANUS GRISWOLD  
1924 Research in Middle American archæology. *Year Book of the Carnegie Institution of Washington*, no. 23, pp. 209-226, Washington. The earliest Mayan dates. *Proceedings of the Twenty-first International Congress of Americanists*, Göthenborg, 1924, pt. II, pp. 655-667.
- 1925 Chichen Itzá, an ancient American Mecca. *National Geographic Magazine*, Washington, Jan., pp. 63-95, map, 34 ill. Research in Middle American archæology. *Year Book of the Carnegie Institution of Washington*, no. 24, pp. 247-270, Washington.
- 1926 Research in Middle American archæology. *Ibid.*, no. 25, pp. 259-286, pl. 1 (col.) and II.
- 1927 Summary of archæological work in the Americas in 1926. III. In Mexico and Central America. *Bulletin of the Pan American Union*, Washington, Feb., pp. 108-121, map and 6 ill. New light on the discovery of Yucatan, and the foundation of the New Maya empire. *American Journal of Archaeology*, Concord, N. H., 2d ser., vol. xxxi, no. 1, pp. 51-69, 13 fig.
- NOVELLA, GUSTAVO  
1925 Clasificacion del estilo Maya entre los demás estilos de arquitectura que se conocen. *Anales de la Sociedad de Geografía y Historia de Guatemala*, Guatemala, tomo 1, núm. 4, Junio, pp. 296-301.

# INDIAN NOTES

PALACIOS, ENRIQUE JUAN

Informe mensual al C. Director de Arqueología. *Boletín de la Secretaría de Educación Pública*, Mexico, tomo vi, núm. 5, Mayo, pp. 52-63, 7 ills.

An account of a rapid survey of the recently discovered Mayan ruins of Tixmucuy, state of Campeche. Five stelæ with hieroglyphic inscriptions were found, and several buildings and a pyramid were uncovered. Stela A contains an initial series, with the date 9.15.0.0.0, 4 Ahau, 13 Yax, corresponding to A.D. 731.

PINEDA, JUAN DE

1925

Descripción de la provincia de Guatemala—año 1549. *Anales de la Soc. de Geogr. y Hist. de Guatemala*, tomo 1, núm. 4.

Contains 8 ills. (maps and views) of Iximche and Utatlan from the Mariano Galvez "Atlas."

POPENOE, WILSON and DOROTHY

1927

Quirigua an ancient city of the Mayas. Reprinted from *Unifruitco Magazine*, May, 12 pp., 17 ill.

REYGADAS VERTIZ, JOSÉ

1925

Ruinas de Zayi. *Anales del Museo Nacional de Arqueología*, Mexico, época 5ª, tomo 1, núm. 2, Abril-Junio, pp. 120-122, 8 ill.

1927

Informe de la Dirección de Arqueología de Mexico. *Boletín de la Secretaría de Educación Pública*, Mexico, tomo vi, núm. 5, Mayo, pp. 47-51.

Contains a notice of the clearing of various ruins in Yucatan and in other parts of Mexico.

RICKETSON, EDITH BAYLES

1927

Sixteen carved panels from Chichen Itza, Yucatan. *Art and Archaeology*, Washington, vol. xxiii, no. 1, pp. 11-15, 6 ill.

# INDIAN NOTES

RICKETSON, OLIVER G.

1925 Burials in the Maya area. *American Anthropologist*, Menasha, Wis., n. s., vol. 27, no. 3, July, pp. 381-401.

1926 Three Maya astronomical observatories. [Read at the meeting of the American Anthropological Association, December. Not published.]

A "Greenwich observatory" of prehistoric America. *Illustrated London News*, Nov. 20. 13 ill.

———, and BLOM, FRANS

1925 Index of ruins in the Maya area. Cambridge. 92 pp., map.

Multigraphed edition of 50 copies (?) privately printed and distributed by the Peabody Museum.

ROCK, FRITZ

1925 Ein mythisch-religiöses Motiv der alten Mayakunst. *Proceedings of the Twenty-first International Congress of Americanists*, Göthenborg, 1924, pt. II, pp. 270-273.

SAVILLE, MARSHALL H.

1924 Terracotta whistle from Guatemala. *Indian Notes, Museum of the American Indian, Heye Foundation*, vol. 1, no. 1, Jan., pp. 16-20, pl. Mayan sculpture from Guatemala. *Ibid.*, no. 2, Apr., pp. 93-96, 4 fig.

1925 The wood-carver's art in ancient Mexico. *Contributions from the Museum of the American Indian, Heye Foundation*, vol. IX.

Pages 88-93 relate to Maya wood-carvings.

SCHELLHAS, PAUL

1926 Der Ursprung der Mayahandschriften. *Zeitschrift für Ethnologie*, Berlin, Heft 1-2, 16 pp., 86 ill.

SCHULLER, RUDOLPH

1927 The native country of the Maya-K'iché Indians. *American Anthropologist*, Menasha, Wis., n. s., vol. 29, no. 2, Apr.-June, pp. 231-240, map.

# INDIAN NOTES

SPINDEN, HERBERT J.

- 1924 The reduction of Maya dates. *Papers of the Peabody Museum of American Archaeology and Ethnology*, Cambridge, vol. VI, no. 4, xiii-286 pp., 62 fig.
- 1926 Maya remains on the east coast of Yucatan. [Read at the meeting of the American Anthropological Association, December. Not published.]

TEEPLE, JOHN E.

- 1925 Maya inscriptions: Glyphs C, D, and E of the supplementary series. *American Anthropologist*, Menasha, Wis., n. s., vol. 27, no. 1, Jan.-Mar., pp. 108-115.
- Maya inscriptions: Further notes on the supplementary series. *Ibid.*, no. 4, Oct.-Dec., pp. 544-549.
- 1926 Maya inscriptions: The Venus calendar and another correlation. *Ibid.*, vol. 28, no. 2, Apr.-June, pp. 402-408.
- 1927 Maya inscriptions: Stela C at Copan. *Ibid.*, vol. 29, no. 3, July-Sept., pp. 278-282.
- Maya inscriptions, IV. *Ibid.*, pp. 283-291.

TERMER, FRANZ

- 1926 Die Staatswesen der Mayavölker. *Proceedings of the Twenty-first International Congress of Americanists*, Göthenborg, 1924, pt. II, pp. 174-182.

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MARSHALL H. SAVILLE

## SOME STRING FIGURES OF THE VIRGINIA INDIANS

ONE of the most widely distributed forms of human pastime is the making of string figures. These, with the related string tricks, have been reported from all the continents and are known to be particularly abundant among the Indians of North America and the Eskimo. In spite of their common occurrence on this continent, however, very few exhaustive studies have been made among the individual tribes. As a consequence our

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knowledge of this interesting subject is still too fragmentary to allow the drawing of any conclusions which might pertain either to the origin of the idea of string manipulation or to the diffusion of any of the individual figures themselves, if such has taken place. That an important problem exists in this connection cannot be denied, but at present the most that can be done is to record the distribution of the various figures as they occur and to postpone any attempt to discuss the subject from a continental point of view.

During a recent trip to the Virginia Indians my attention was called to the practice of making string figures by these people. On inquiry I was able to procure three string figures and one string game, which will be described below. It is unfortunate indeed that only three figures were obtainable, but these are the only ones which seem to be known at the present time. There is a common tradition, however, that many more were known and made by the members of the last generation.

At the present day the Chickahominy seem to be the only group among whom string figures are still generally practised. Practically all the adults and children know how to make at least one figure, and many can make all three. The "rigged ship" or "making ropes," "Jacob's

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ladder," and "crow's feet" are all common to them, and they have also a memory of a "butterfly," although I could find no one who was able

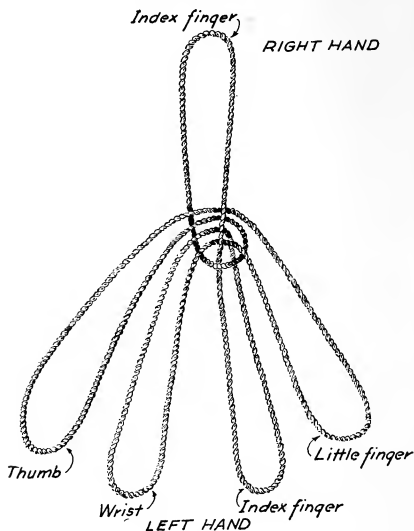


FIG. 141.—A rigged ship, or making ropes.

to produce the finished figure of the latter. "Jacob's ladder" and "crow's feet" are known also to the Mattaponi, Upper Mattaponi (Adams-



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town Group), and Pamunkey. "Threading the needle," a string trick, was noticed only among the Pamunkey. Among these three groups, however, in contrast to the Chickahominy, only a few individuals seem to remember these string figures.

The "rigged ship," or "making ropes" (fig. 141), as it is performed by the Chickahominy, is similar in final appearance to the "hogán" made by the Navaho, but the method of manipulation is

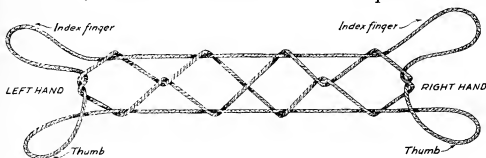


FIG. 142.—Jacob's ladder.

entirely different.<sup>1</sup> It is important and interesting to note, however, that the Chickahominy manipulation is identical with that which is followed in Central Africa to make a "temporary grass hut."<sup>2</sup> Every feature of these two figures is the same.

"Jacob's ladder" (fig. 142) is common to all

<sup>1</sup> Haddon, K., *Cat's Cradles from Many Lands*, London, 1912, pp. 47-48. Jayne, C. F., *String Figures*, New York, 1906, pp. 243-245.

<sup>2</sup> Haddon, *op. cit.*, p. 29.

## INDIAN NOTES

the Virginia tribes mentioned. Jayne reports that it is known to Indians under this name, but she mentions no specific tribes. Among the Osage this figure is known as "Osage diamonds." The Osage method of manipulation is identical with that which I have recorded. This figure has been found by Roth in British Guiana,<sup>3</sup> it is also listed from the Hawaiian Islands, and, fur-

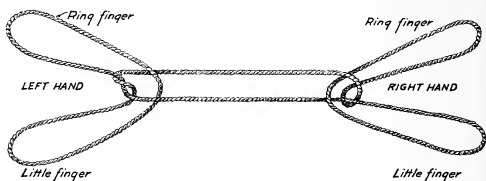


FIG. 143.—Crow's feet.

thermore, it occurs in Ireland, where it is called a "ladder" or "fence."<sup>4</sup>

An almost universal figure is that of "crow's feet" (fig. 143). A. C. Haddon secured it from a Cherokee mixed-blood under that name.<sup>5</sup> The manipulation is nearly identical with that which

<sup>3</sup> Roth, W. E., *An Introductory Study of the Arts, Crafts, and Customs of the Guiana Indians*, 38th Ann. Rep. Bur. Amer. Ethnol., Washington, 1924, p. 526.

<sup>4</sup> Jayne, op. cit., p. 24.

<sup>5</sup> Haddon, A. C., *A Few American String Figures and Tricks*, *American Anthropologist*, vol. 5, 1905, p. 217.

## INDIAN NOTES

I learned in Virginia. Jayne reports it from the British Isles, where it is called "the leashing of Lochiel's dogs," and it is also known in Ireland as "duck's feet."<sup>6</sup> It has been introduced into Algeria from France under the name of "cock's feet;" it occurs among the Ulunga in Africa as a "wooden spoon," and has been described as practised by the natives of German East Africa. There is a similar pattern in North Queensland, Australia. Haddon reports that Gordon found it among the Eskimo, and there seems also to be a slight resemblance between it and "two hogáns" of the Navaho, just before the completion of the latter figure.

"Threading a needle" has a very wide distribution not only in North America, where it has been reported from the Omaha, Pawnee, and Kwakiutl, but elsewhere throughout the world, occurring among peoples as remotely distributed as the Japanese, the Caroline Islanders, and Europeans.<sup>7</sup> It is generally called "threading a closed loop."

Following is a description of the figures as they are made in Virginia. I have followed in part the system of Roth.

<sup>6</sup> Jayne, *op. cit.*, pp. 116-121; Haddon, K., *op. cit.*, pp. 73-74.

<sup>7</sup> Haddon, A. C., *op. cit.*, p. 218; Haddon, K., *op. cit.*, p. 89.

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### *The Rigged Ship, or Making Ropes*

(Chickahominy)

- L. H. Place the string radial to the thumb, between the thumb and index finger, across palm, between ring and little fingers, around the ulnar side of the little finger to the beginning, allowing the long loop to hang in a palmar position.
- R. H. Reach through the hanging loop and around the ulnar side of the left hand. Pick up the dorsal thumb string with the thumb and index finger and pull downward and around the left hand and through the long hanging loop. Lift upward and place the loop formed over the left index finger.
- R. H. Pick up with the right thumb and index finger the string running between the ring and little fingers, and draw out. Place the formed loop over the left thumb.
- R. H. Reach over the left hand and grasp the distal dorsal string. Pull it over and off the left hand, and draw out. (Fig. 141.)

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### *Jacob's Ladder*

(Chickahominy, Mattaponi, and Pamunkey)

Position 1, Opening A with diagonal strings looped on index fingers.<sup>8</sup>

B. H. Drop thumb loop.

B. H. Pass thumb under all strings and pick up ulnar little-finger string with back of thumb. Return.

B.H. Carry thumb over radial index-finger string and pick up ulnar index-finger string with back of thumb. Return.

B.H. Drop little-finger loop.

B.H. With little finger reach over index-finger strings and with back of little finger pick up the ulnar thumb string. Return.

B.H. Drop thumb loop.

B.H. Reach over index-finger strings with thumb and pick up with back of thumb the radial little-finger string. Return.

<sup>8</sup> Position 1, Opening A is a common starting point for string figures. Position 1 is made by placing the string on both hands so that it is radial to the thumb, dorsal to the thumb, between thumb and index finger, across palm, between ring and little fingers, around back of little finger, ulnar to little finger and thence to a like position on the opposite hand. To secure Opening A insert the right index finger from below into the left palmar string, pull out with back of index finger and return. Repeat with the left index finger, taking up the right palmar string between the strings which form the loop on the right index finger.

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- L.H. Use right thumb and index finger to pick up left radial index-finger string close to the finger and place over the left thumb. Take up proximal radial thumb string and slip over thumb to ulnar side.
- R.H. Repeat on right hand, using left thumb and index fingers.
- B.H. There is now a triangle the base of which is palmar to the thumb. Insert the index finger of each hand into its respective triangle, drop off little-finger loop and slowly turn the hands downward and outward until the strings are taut. (Fig. 142.)

### *Crow's Feet*

(Chickahominy, Mattaponi, and Pamunkey)

- Position 1. Opening A with diagonal strings on middle fingers.
- B.H. Reach over middle-finger strings with ring finger and insert into thumb strings. With back of ring finger take up radial thumb string and remove thumb loop to ring finger.
- L.H. Holding the right-hand strings so they will not come loose, insert the right thumb and index finger downward between the left ring-finger strings. Pick up the radial little-finger string and draw up through the ring-

## INDIAN NOTES

finger strings and place over the little finger so that it runs along the ulnar side. Pick up with the right thumb and index finger the proximal little-finger string, lift over the little finger and place on the radial side.

R.H. Repeat on the other hand.

B.H. Drop the middle-finger loop and draw out.  
(Fig. 143.)

### *Threading the Needle*

(Pamunkey)

Since this trick is performed in the same manner as described by Jayne<sup>9</sup> for "threading a closed loop" I will quote from her directly.

"First: Take a piece of string about eighteen inches long, and, holding it at the middle between the tips of the right thumb and index, wind a portion of one-half of it around the left thumb, toward the body above the thumb, and away from the body under the thumb, the left hand being held with the thumb and index pointing to the right.

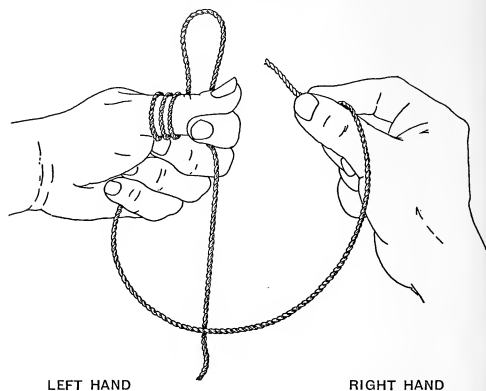
"Second: In the part of the string which you have been holding between the right thumb and index make a small loop and place it between the tips

<sup>9</sup> Jayne, op. cit., pp. 354-355.

## INDIAN NOTES

of the left thumb and index, so that it stands erect; hold it there and remove the right thumb and index.

“Third: Pick up between the tips of the right thumb and index the end of the other half of the



LEFT HAND

RIGHT HAND

FIG. 144.—Threading the needle.

string, which is hanging down from the far side of the left thumb, then draw it to the right [fig. 144]. Now make several passes with the right hand as if you were trying to thread the end of the right-hand string through the erect loop held by the left hand; finally pass the right hand



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to the left over the left hand, apparently threading the loop, but really drawing the part of the string which hangs from the right hand, between the left thumb and index as far as you can. The loop, which is still held by the left thumb and index, appears to have been threaded by the right-hand string."

D. S. DAVIDSON

### WAR-GOD IDOLS OF SAN JUAN PUEBLO

FEW collections illustrating Pueblo culture exceed in ethnologic value the material gathered by the late Samuel Eldodt, who for many years was a trader at the historic Tewa pueblo of San Juan, New Mexico. This collection was recently purchased by Fred Harvey, which organization, through Mr. Herman Schweizer, in charge of its museum at Albuquerque, has accorded the Museum of the American Indian, Heye Foundation, the privilege of acquiring a selection therefrom, including two figurines of clay, made in facsimile of the originals so zealously guarded by the religious officials of San Juan, as the accompanying statement (fig. 145), in Bandelier's handwriting, attests. A translation follows:

I, Candelario Ortiz, *Zibui-mayor* of the Pueblo of *Oj-qué*, otherwise called San Juan de los Caballeros, certify that the two

## INDIAN NOTES

idols called *To-ā-yab'*, actually in possession of the Señor Don Samuel Eldodt, are not the originals, but are copies made of clay, yet are of the form, painting, and adornment of the ancient ones which are under my control.

I say and certify also, that having fear of my life should I perchance give away the originals which belong, not to me, but are the property of the body of Zihuis, whose chief, head, or *sen-do* [*séndo* = "old-man"] I am, I relinquished the copies to the said Sr. Eldodt, reserving the originals for the use and benefit of my said pueblo.

San Juan de los Caballeros, New Mexico,  
March 1, 1889.

his  
Candelario X Ortiz  
mark

Witnesses

Julius Friedman  
Ad. F. Bandelier.

The idols are each nine inches high and are rather crudely made of unfired clay. In form they are identical, except that the one illustrated (fig. 146) is slightly constricted near the base, whereas the other is quite cylindrical. The arms are barely indicated; legs and feet are not suggested. The entire body and the back of the head are painted with a reddish earth, while the face, quite flat save for the nose and the brows, is black (as becomes the warrior), smeared with white, and surrounded by a whitish band which widens at the neck. The mouth is a mere slit filled with red paint; the eyes are represented by embedded pieces of haliotis-shell. Symbolic of warriors are incised crosses filled with white pigment—two on

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Certifico Yo, Candelario Ortiz, Zihui =  
 = Mayor del Pueblo de Ojoque, por otro nombre San  
 Juan de los Caballeros, que los dos Idolos llamados  
To-a-yah, actualmente en posesion del Señor Don  
 Samuel Eldodt, no son los Originales, sino unas  
 copias hechas de Barro, pero al tamaño, pintura, y  
 adornos de los antiguos que estan en mi poder.

Digo y certifico tambien, que temiendo yo  
 peligro de Vida si acaso enaginasen los originales  
 cuales pertenecen, no a mi, pero en propiedad al re =  
 = baño de los Zihui cuyo Mayor, Cabeza, o' "Sen =  
do" yo soy, - yo he dejado las Copias al dicho S<sup>r</sup>  
 Eldodt, rogando los Originales para el uso y  
 beneficio de dicho mi Pueblo.

San-Juan de los Caballeros, Nuevo - México, y

17 de Marzo de 1889. años,

Testigos de asistencia:

Candelario Ortiz  
 marca

Julius Friedberg  
 Ad. J. Bandelin.

FIG. 145.—Affidavit of Candelario Ortiz in regard to the war-god images

INDIAN NOTES



FIG. 146.—One of the war-god images of San Juan. Height, 9 in. (15/4226)

## INDIAN NOTES

the back and the front, and one on each side, as if possibly representing the six world-quarters so characteristic of Pueblo cult, to each of which, in the belief of the San Juan Tewa, was assigned a war god, or *Tówaí*, evidently Bandelier's *To-ä-yah'*. Diagonally through the body below each shoulder is a small hole, slightly accentuating the rudimentary arms. Passing through each of these openings is a partly stripped feather, the quill-ends forward. Over the left shoulder of one of the idols and over the right shoulder of the other, baldric fashion, is a double strand of red-painted yucca strips, and a four-strand band forms a loose belt, all rudely tied and fringed at the ends. It is possible that these belts originally passed over the other shoulders. In the top of the head of each image, near the front, a small wooden peg is inserted, for what purpose is not manifest, unless to hold a small downy feather in place.

The term *Zibui* mentioned in the affidavit as the official title of Candelario Ortiz the signer, is probably *Tsíwi*, the Tewa adaptation of Keres *Shíwanna*, the name of the masked personators of the cloud gods, a term almost synonymous with *Kátsina*. If so, it may be conjectured that *Zibui-mayor* may signify chief rain priest or chief cloud priest. Be that as it may, the twin war gods are characteristic of Pueblo mythology, and their

images enter into many ceremonies and form an important feature of certain warrior shrines. The personages represented by the two idols find their counterparts, for example, in Tsamáhiya and Yúmahiya of Acoma and other Keres villages, and in Ūyuyewi and Máasewi (the Ahaiiyuta and Matsailema of Cushing) of Zuñi.

F. W. HODGE

## A BONE IMPLEMENT OF THE WASHO

So very few early artifacts of the Washo Indians have found place in our museums that it may be well to describe an unusual bone implement, now in the Museum collection, obtained from an old Washo site in Nevada.

Today the Washo live more or less a parasitic existence, depending largely on the charity of the neighboring whites for their subsistence. They were quick to adopt the white man's customs and to forsake their own, so that now little is left to indicate their former mode of life. A few women still practise the almost forgotten art of basket-making; the primitive form of the wickiup, rudely constructed of brush and canvas, still remains among some as the typical Washo dwelling, and rabbit-skin robes, woven on rags instead of on the old-time fiber or throng base, may still

## INDIAN NOTES

be obtained. A source of Washo income is the sale of piñon nuts, a primitive food for which there is a growing demand by white people. Tribal rabbit-hunts are still conducted, but not so frequently as in former times. The practice of holding the "cry" for the dead is rapidly giving way to the white man's mode of burial, even white undertakers officiating. In short, the Washo cultural traits yet surviving will soon be a thing of the past.

On the east side of Washo lake, Washo county,



FIG. 147.—Bone implement of the Washo. Length,  $6\frac{5}{8}$  in.  
(15/3324)

Nevada, there is an extensive old Washo camp- and village-site. The prevailing winds from the mountains across the lake to the west continually cause the sand-dunes to shift, exposing broken fire-stones, flint chips, arrowpoints, bird and animal bones, and an occasional human skeleton. It was at this site that the bone implement referred to was found buried to half its length in the sand, the upper portion split and bleached by exposure. As it was recovered by inexperienced hands before the writer could prevent it, the

## INDIAN NOTES

implement was broken, but it has since been restored, as indicated by the stippled portion in the sketch (fig. 147).

The implement is made from a split animal bone, ground and polished, and measures six and five-eighths inches in length. The pointed tip is somewhat scored, but the marks do not pass entirely around the tip, hence they give the impression that they are the result of cutting down the bone and sharpening.

By way of ornamentation, on one side of the implement, extending lengthwise, is a series of small drilled dots, forming a pattern not unlike the zigzag designs appearing in Washo basketry and called by them *daguboloyécūe*, meaning "little spots in lines," according to Dr. Barrett.<sup>1</sup>

As to the use to which the implement was put, one can only hazard a guess. It may be classed as an awl, but the point is broader and flatter than awls usually are, while the smoothness of the rounded edges precludes its classification as a knife. More likely the implement was used either for smoothing down seams of skin garments or for flattening and smoothing bark and willow strips preparatory to basket-making. If the Washo had employed the quills of the porcupine,

<sup>1</sup> The Washo Indians, *Bull. Pub. Mus. Milwaukee*, 11, no. 1, p. 24, Milwaukee, 1917.



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an animal plentiful in the mountains, one would be inclined to term the tool a quill-flattener.

No bone implements seem to be mentioned among the tools spoken of in publications on the Washo, and the writer saw only one set of gambling bones in a Washo's possession.

LOUIS SCHELLBACH

### THOSE GREEN RIVER KNIVES

INCLUDED in the Museum collections are many articles of white man's manufacture which, although not Indian materials in the true sense of the term, are nevertheless of interest and importance to students of the American tribes, as it was through their introduction that the aboriginal material culture was so largely displaced.

These products of civilization range from glass beads to iron kettles, including in the miscellany, knives, hatchets, silverwork, cloth, blankets, etc. It is well known that the frontiers were extended by the opening of trade with the various tribes. A few beads and knives formed the entering wedge which ultimately resulted in the almost complete acquisition of the Indian lands, yet curiously enough little is known of the origin of these trade goods that opened the way to conquest. This brief historical sketch of a single class of such trade

## INDIAN NOTES

goods, which were carried into the trans-Mississippi region in the early part of the 19th century, may serve in a measure to show the economic importance of a study of such material and its effect on the development of the early industries of the country in relation to Indian trade.

During that highly picturesque period of the opening of the Far West in the two decades preceding the rush to the California goldfields in 1849, travelers venturing into the wilds of the Plains country and the Rocky Mountain region often wrote thrilling narratives of their experiences. In many of these are descriptions of the appearance, customs, and accouterments of both the white trappers and the Indian hunters. One of the tools or weapons that appeared to have intrigued the fancy of those observers and which was mentioned more specifically than any other was the "Green River" knife.

In reading several of the accounts written during the period, the writer noted the frequency with which authors referred to these knives and became a bit curious as to what the implements might have been and their source of origin. Turning to the Museum collections, he found therein several of the hunting and scalping knives, obtained principally from the Plains tribes, bearing worn but legible letters and brand, "J. Russell and Co.

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Green River Works." Certain that this style of knife must be of American manufacture, further



FIG. 148.—John Russell, 1797-1874, founder of the Green River Works.

search revealed the fact that not only were the Green River Works an American institution but

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that they were one of the first cutlery factories established in this country, that they are still productive, and are rated as among the leading establishments of the kind in New England.

The Green River Works were founded in 1834 by John Russell, a descendant of an old New England pioneer family.<sup>1</sup> The first establishment was built on the banks of Green river, a small stream having its source in southern Vermont and flowing southward into Deerfield river, near Greenfield, Massachusetts.

Prior to his entry into the manufacture of cutlery, Mr. Russell in his youth had been engaged in silversmithing and goldsmithing, but later went to Georgia where he speculated in cotton and from 1824 to 1828 accumulated a fortune and decided to retire from business. In 1830 he married Juliana Witmer, of Lancaster, Pennsylvania, and two years later he and his wife returned to Greenfield, the home of his youth, for a visit. While there his family persuaded him to settle in Greenfield, but it was a dull place to one accustomed to the social activities of the South, and he concluded to enter some kind of business. Imagine

<sup>1</sup> For a genealogical history of the Russell family see "An Address by Hon. John E. Russell of Leicester," *History and Proceedings, Pocumtuck Valley Memorial Association*, vol. VIII, Deerfield, Mass. This is the only complete sketch of the Russell family and the Green River Works.

## INDIAN NOTES

the surprise of his family and friends, therefore, when he commenced to engage in the manufacture of cutlery, an industry as yet untried in this country and one in which Russell had no experience.

A small book entitled "The Practical Tourist," published by A. S. Beckwith in Providence, giving an account of the travels of Zachariah Allen, a cloth manufacturer of Rhode Island, was the spark which fired the imagination of John Russell and induced him to commence the manufacture of knives and other edged tools. In his book Beckwith related Allen's observations on the steel industry of England, dwelling particularly on the extensive cutlery and tool works at Sheffield, then the center of the cutlery business.

Seeing possibilities of success in the establishment of a cutlery factory in the United States, Mr. Russell built a stone and brick plant on the banks of Green river, being his own architect and engineer. He commenced by manufacturing chisels and such simple tools, these being the only kinds he could produce, owing to lack of skilled workmen, there being no artisans of the cutler's trade in the United States at that time. He suffered a loss by fire, which however was not severe enough to delay his project; but a spring flood wrecked his buildings, dam, canal, and bridge,

## INDIAN NOTES

which proved discouraging but not disheartening. Russell rebuilt, and was joined by his younger brother Francis, a merchant, who took charge of the sales and opened a clearing house for their product in New York, thereby enabling the firm to sell directly to its customers instead of consigning the goods to commission houses.

In 1836, Henry Wells Clapp, a retired manufacturing jeweler of New York, joined the firm and thenceforward until the end the members were staunch friends. During the panic of 1837, when many other business organizations were forced into bankruptcy, the J. Russell & Co. Works weathered the financial storm without suffering reverse of fortune.

Mr. Russell retired from the concern in 1868 and died December 27, 1874. In the former year the firm was incorporated under the laws of Massachusetts and the name changed from "J. Russell & Co. Green River Works" to the "John Russell Manufacturing Co." In 1873 it was reorganized and the name changed to the present one, "John Russell Cutlery Co."

As above mentioned, the cutlery industry prior to the establishment of the Green River Works was mainly in the hands of English manufacturers, with its center at Sheffield. In those days most of the product was the result of piecework and

## INDIAN NOTES

was done by hand, the Sheffield workmen carrying on their trade in their homes. Many of the families engaged in the manufacture of cutlery had been in the business for generations, even the women and girls being experts in forging blades. Steel was furnished them by the master cutlers and blades of the kinds ordered were produced. Hafting was also done in this way. Russell, with true Yankee ingenuity, brought about a radical change in the industry when he established his water-driven works on the banks of Green river.

To begin with, he imported his raw materials—steel, emery, grindstones, ivory, bone, horn, brass, wire, ebony, etc.—in sufficient quantities to keep his factory in operation for a year at a time. He paid much higher wages than the English cutlers, and in time drew to his factory not only some of the best workmen in Sheffield, but German craftsmen as well were attracted to Greenfield.

With his waterpower machines Russell was enabled to employ



FIG. 149.—The "Dadley." Length of blade, 6 in.

## INDIAN NOTES

heavy drop-hammers which brought about a change in the system of forging the blades of the knives he manufactured. In England forging was done by hand, but by means of the drop-hammers the "bolsters," or that part of the blade adjoining the handle, which the Sheffield men "swaged" by hand, were shaped more expeditiously and economically, and the blades were then trimmed by stamping.

The practice of parceling out the work in Sheffield made the American system impossible at the time for the English manufacturers, hence the Green River Works passed far ahead of foreign competitors both in quality and quantity of their wares, and in a comparatively short time assumed the lead in the manufacture and distribution of cutlery the world over.

Prior to the Mexican War in 1846 the blades from the Green River Works found a ready sale in Mexico. When war broke out, however, this trade was diverted to South America. Almost from the time of the establishment of the factory, the knives bearing the Green River stamp found favor on the frontiers of the United States. Many different forms were made, but of all the types that known as the "Dadley" was the most favored by white hunters and trappers. This blade (fig. 149) is supposed to have been designed by a frontiers-



INDIAN NOTES



*a*

*b*

FIG. 150.—*a*, Sheath and carving knife, Brulé Dakota; the blade was originally 8 in. long (1/3959). *b*, Butcher knife, Brulé Dakota; blade, 6 in. (1/3401).

## INDIAN NOTES

man whose name it bore and was in great demand among both Indians and white men of the upper Missouri country from 1835 to about 1860.

Other types in popular favor among the Indians are those known to the trade as "Butcher Knife No. 15" and "Carving Knife No. 1586" (fig. 150). The original length of the blade of the butcher knife was six inches and that of the carving knife eight inches.

Nor were the knives used solely as a part of hunting equipment. The Plains Indians often removed the blades from their haftings and reset them in warclubs, making ugly-looking and no doubt highly efficient weapons. There are several clubs of this type in the Museum collections. The one pictured in fig. 151 is in the Old South Museum, Boston.

A peculiarity of the knives obtained from the Indian country is that all of the blades of those used as skinning tools are bevel-sharpened on one side of the cutting edge. This was done in order to facilitate the skinning of game, to keep the edge of the knife pressed firmly against the flesh and prevent accidental slashing of the hide. This additional sharpening was done by the Indians and white hunters themselves. When they left the factory the knives were ground equally on both sides of the cutting edge. The skinning knives

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in fig. 150, which were collected from the Brulé Dakota, show this beveled edge quite plainly.

In the early days of the Green River Works the output was comparatively small. Fifty dozen knives was a good day's product; this would make the average yearly output about 187,200 knives. Of this number it is on record that the approximate number of knives shipped to the Far West between 1840 and 1860 was about 5,000 dozen per year. Mr. John E. Russell, a direct descendant of the founder, makes the following statement concerning the number sent to the Northwest Territory.



FIG. 151.—Warclub set with Green River knives, in Old South Museum, Boston.

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"I remember hearing it said that one shipment of Hunter's Knives, some sixty or seventy casks that went to the old Indian traders, Pierre Chouteau & Co., contained more knives than there could be inhabitants, red and white, in the undefined Northwest."

When packed for shipment to the West, the knives were placed in small kegs, which were sent by vessel to New Orleans, thence to St. Louis by river steamer, and from that point distributed by boat and wagon-train to their various destinations. A great deal of the business with Mexico was conducted through American traders going from St. Louis to New Mexico over the Santa Fe Trail. Practically all of the knives used by the fur companies of the upper Missouri country were supplied by the Green River Works, and it was from the trading posts of the Upper Missouri Outfit, headed by Pierre Chouteau, Jr., that the Indians and trappers obtained their supplies. This organization was known originally as Bernard Pratte and Co., later as the Columbia Fur Company, and still later as the Upper Missouri Outfit. In 1838 its name was changed to Pierre Chouteau, Jr. and Co., and it is with the two latter companies that John Russell conducted his business.

The distance being so great and methods of

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communication slow, business with the Western traders was conducted generally on terms of six months. Knives sold under these conditions usually brought \$1.50 to \$3.50 per dozen wholesale, depending on the style and material of the handles. In addition to handles of wood (ebony and cocobolo), ivory and rubber were sometimes used. These in return retailed in the Indian country at fifty cents to \$1.50 each. In fact, Gen. Thomas James,<sup>2</sup> writing of the prices charged by the fur companies for the commodities of life, states: "He [the reader] can easily imagine the process when he is told that the company charged us six dollars per pound for powder, three dollars for lead, six dollars for coarse calico shirts, one dollar and a half per yard for coarse tow linen for tents, the same for a common butcher knife, and so on."

To the Indian or the white trappers, however, the knives were evidently worth the price asked for them. By 1846 the fame of the Green River blades had spread throughout the Rocky Mountain region. The mountain men, or free trappers, used the name of the Green River knife as a standard of quality of anything traded, from a horse

<sup>2</sup> *Three Years Among the Indians and Mexicans*, Waterloo, Ill., 1846; reprinted, Missouri Historical Society, St. Louis, 1916.

to a trap. Anything done "up to Green River" signified that the action was first-rate. On the other hand, the cry of a trapper in a fracas, or "fofarraw" as mountain parlance had it, "Give it to him, up to Green River!" had quite another signification. Knives were the handiest means of settling disputes, and since the brand of the company was stamped on the blade not far from the hilt, the meaning of the expression is obvious.

Ruxton,<sup>3</sup> mentioning the Green River knife, says:

"For as may be imagined, a thrust from the keen scalp-knife by the nervous arm of a mountaineer was no baby blow, and seldom failed to strike home—up to 'Green River' on the blade." In a footnote the editor of the book, commenting on the use of the term Green River, has this to say:

"The knives used by the hunters and trappers are manufactured at the 'Green River Works' and have that name stamped upon the blade. Hence the mountain term for doing anything effectual is 'up to Green River.' "

Later, Lewis H. Garrard,<sup>4</sup> a traveler in the western country, brings the Green River knives into his narrative several times, having his trapper

<sup>3</sup> *Life in the Far West*, p. 199, New York, 1849.

<sup>4</sup> *Wah-To-Yah and the Taos Trail*, pp. 185, 188, 243, Cincinnati, 1850.

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character, John L. Hatcher, refer to the blade in various instances, as follows:

" . . . a little bacca of its a plew, a plug, and Dupont an' Glena, a Green River or so and he leaves for Bayou Salade. Darn the white diggin's when thar's buffler in the mountains."

Relating an Indian experience, Hatcher says: "Sez I, hyar's a gone coon eft they keep my gun, so I follers thar trail an' at night crawls into camp an' socks my big knife up to Green River—first dig."

It also appears that Hatcher would have used the trusty blade against even the Devil himself, having encountered that personage in a wild dream after emptying a rum bottle, for the tough old battler remarks:

" . . . an' I put out my hand for my knife to kill the beast, but the Green River wouldn't come."

Thus it would seem that these famous old knives played no little part in carving out the wilderness beyond the Mississippi. Few articles of the old-time Indian trade have had such a romantic and prosperous history as these blades.

In conclusion the writer wishes to make grateful acknowledgment to Mr. Charles E. Hazelton, treasurer of the John Russell Cutlery Company, Green River Works, Turners Falls, Massachusetts,

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for his valued aid in supplying the historical and statistical data on the knives themselves, without which this article could not have been written.

ARTHUR WOODWARD

### RECENT ACCESSIONS BY GIFT

*From Mrs. G. I. Abbott:*

Eight arrowpoints. Vicinity of New York.

*From Mrs. Howard C. Benedict:*

Pair of beaded moccasins. Blackfoot.

*From Mr. Reginald Pelham Bolton:*

Small circular stone; cone-shape stone. Virginia.

*From Mr. George Bonawit:*

Arrowpoint. Ridgefield, New Jersey.

Eleven chipped implement blanks; six arrowpoints; three hammerstones. Coxsackie, New York.

Quartz spearpoint. Connecticut.

Two arrowpoints. British Columbia.

Two arrowpoints. Tennessee.

Spearpoint. Wyoming valley, New York.

Arrowpoint. Rat Hill, Arkansas.

Stone pendant representing a bird's head; arrowpoint.

Turtle mound, Florida.

Two axes. Hawikuh, Zuñi, New Mexico.

Stone animal hunting fetish. Zuñi. Ojo Caliente, New Mexico.

*From Mr. William L. Calver:*

Two buttons of the French and Indian War. From rock-shelter in Haskell, New Jersey.

*From Mrs. Alice L. de Santiago:*

Basket; powder horn; jar. New Mexico.

Pottery figure; small pottery canteen. Keres. Santo Domingo, New Mexico.

Small beaded bag. Apache.

Small beaded bottle. Pima.

*From Lieut. G. T. Emmons, U. S. N., retired.*

Two photographs.



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*From Mr. S. C. Evans:*

Five photographs.

*From Mrs. Ralph Grimes, in memory of Mrs. Geneva Moulton:*

Wooden warclub. Said to have been collected from the Massachusetts Indians, but probably of South Sea Island origin.

*From Mrs. Thea Heye:*

Large flat celt-shape stone used as mold for gold ornament. Colombia.

Bronze "knuckle duster" with head on end; bronze knife with handle, on which is a bird. Lambayeque, Peru.

Double jar of bronze with human figure on one side. Coast north of Lima, Peru.

Stone clubhead with six points. Cayabamba, Peru.

Erotic jar representing a man. Chimbote, Peru.

*From Mr. John B. Lawrence:*

Beaded and quilled shirt; pair of beaded and quilled leggings. Assiniboin

Three pairs of moccasins; tomahawk. Santee Sioux.

Pair of moccasins. Bush Cree.

Warclub with quilled decoration; knife-sheath with beaded decoration; awl-case with beaded decoration; catlinite pipe with wooden stem. Oglala Sioux.

Sixteen arrows. Sioux.

Parflèche head-dress case. Crow.

Bottle covered with beadwork. Pima.

Three toy paddles; bottle covered with basketry. Tlingit. Alaska.

Pair of deerskin trousers; tanned deerskin; knife; quirt; horn trumpet.

*From Mr. Sigismund B. Levy:*

Idol. Oreopeo, State of Michoacan, Mexico.

*From Miss Lillian Orthwein:*

Net-sinker. Dunnfield, New Jersey.

*From Mr. William D. Phyfe, in memory of Mr. J. H. Phyfe:*

Three hundred and twenty-five potsherds; five celts; ten axes; nine hammerstones; twenty-four notched sinkers; six grooved sinkers; thirty-one pitted stones; twenty-three hoes, blanks, and rejects; three pestles; six worked stones; ten hundred and forty-three arrow, spear, and drill points, and blanks, etc.; gouge; three adzes; two paint stones. Westchester county, New York.

Seventy-four potsherds. New Mexico.

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*From Mr. Ernest Schernikow:*

Small gold figure. Panama.

*From Mr. William Smith and Mr. William Hirsch:*

One hundred potsherds; twenty arrowpoints; three hammer-stones; broken celt; lead bead; bone awl; twenty blanks and worked stones; notched sinker. Village-site at 151st Street and 152nd Avenue, South Ozone Park, Queens, New York.

*From Dr. F. G. Speck:*

Twelve hundred and forty-six negatives.

*From Mr. Edward Swenson:*

Ten arrowpoints; scraper; four blanks. South Ozone Park, Queens, New York.

*From Mr. L. Winternitz:*

Five photographs of Ottawa and Chippewa Indians.

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# INDIAN NOTES

## NOTES

MR. DONALD A. CADZOW, who represented the Museum on the Putnam Baffin Island expedition which left Rye, New York, in June, returned to New York on October 4th. A representative collection of ethnological objects from the Eskimo of Baffin island was gathered by Mr. Cadzow in the vicinity of Amaqdjuaq, Cape Dorset and Fox channel, and an archeological reconnaissance was made on the shores of Labrador and along the south coast of Baffin island. The ruins of ten stone houses were excavated and surveyed near Cape Dorset and many interesting specimens illustrating the material culture of the early Eskimo were obtained. The geographical and other units of the expedition report highly successful results from their summer's work.

DURING a recent visit to San Francisco the Director procured a valuable collection of Mexican antiquities, consisting largely of idols of stone and smaller objects of the same material, as well as a number of pieces of pottery. Among the artifacts are two remarkable stone masks, and several stone idols of great interest and importance, also three unusually well modeled pottery flutes, one

## INDIAN NOTES

of which is double-tubed. Most of the specimens are attributed to the Nahuan culture of the region of the great central tableland of Mexico. The outstanding pieces in the collection will be illustrated in a later number of *Indian Notes*.

MR. WILLIAM WILDSCHUT devoted considerable time during the last summer to a reconnoissance of the western Sioux country with a view of future ethnological inquiries and the gathering of specimens.

THE MUSEUM has recently acquired several carved house-posts of the almost extinct Malahat, a division of the Salish on the west side of Saanitch inlet, Vancouver island.

NOTED too late for inclusion in Professor Saville's Check-list of Recent Publications on Mayan Archeology, on pages 370-384 of this issue, is the following title:

T-ZZER, A. M.

1927

Time and American archaeology. *Natural History*, New York, vol. xxvii, no. 3, May-June, pp. 210-221, 4 pls., 10 figs., including 4 maps.

A modification of this paper, without illustrations, appears under the title Chronological Aspects, etc., noted on p. 383 ante.

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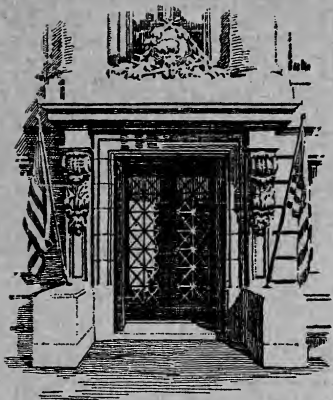
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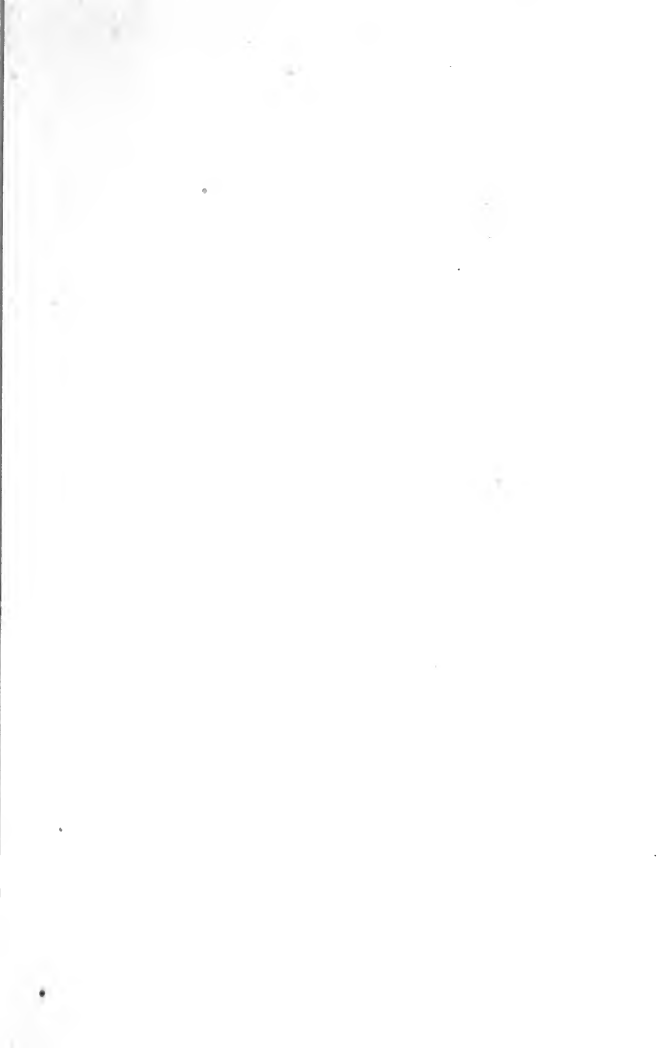
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